The Orchadian

Royal Botanic Gardens
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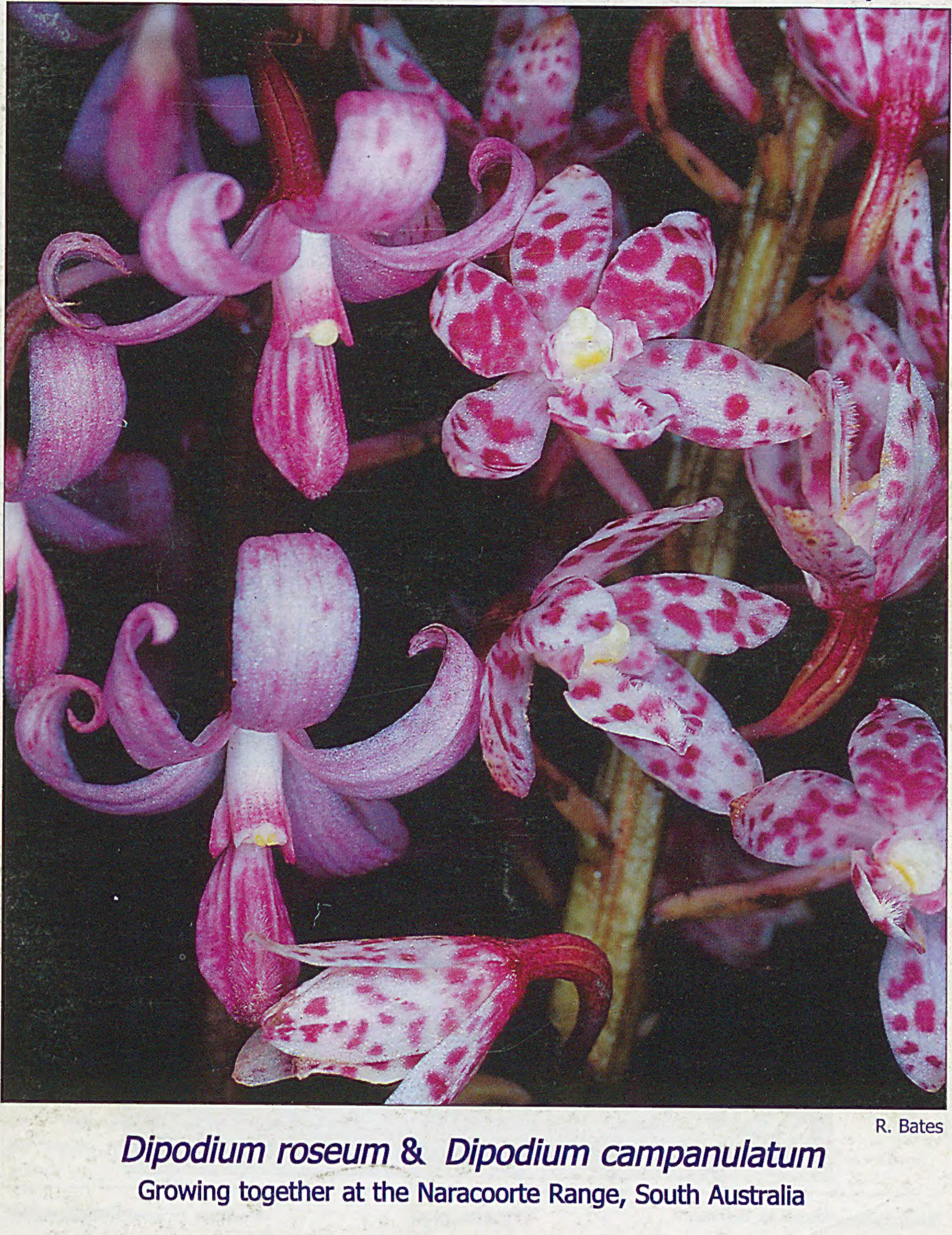
Volume 13, Number 6 www.anos.org.au December 2000

Official Journal of the Australasian Native Orchid Society



R. Bates

Dipodium roseum & *Dipodium campanulatum*

Growing together at the Naracoorte Range, South Australia

Sid Batchelor (1929-2000)

The Australian orchid community lost one of its icons, with the recent passing of Sidney Albert Batchelor. Sid had been a friend to the Banks family for over 50 years. Sid and his late father grew exotic orchids and were involved in the Parramatta and District Orchid Society from its genesis back in 1950. My father Graeme struck up a friendship with Sid in that inaugural year, which certainly grew over the years.

In the mid 1970s Sid's attention shifted to Australian native orchids. He started acquiring choice species and hybrids with a view of creating his own breeding lines. At this stage Sid decided that he would do his own flasking. The quality of Sid's flasks then became a benchmark for others to aspire to. I still remember his first hybrids; a remake of *Dendrobium* Ellen and a cross between *D.* Eureka and *D. kingianum* 'Betty', which he later registered as *D.* Yondi. From that point the name "Yondi" was forever linked with Sid. He bred some great orchids, many using his beloved *D.* Star of Gold 'Bathurst'. Producing *D.* Yondi Tina 'Goliath' FCC/AOC-NSW, FCC/ANOS was his finest hybridising effort.

Sid was involved with a lot of orchid societies; being a Past President and life member of Cumberland Orchid Circle, a life member and patron of ANOS Sydney Group, a life member of ANOS and a respected member of OSNSW and the Australian Orchid Foundation. In 1993, Sid was presented with the prestigious Ira Butler Gold Trophy for Outstanding Achievement in the breeding of Australian native orchid hybrids.

Sadly, on the day of Sid's passing, I was on a plane to New Zealand. I didn't find out about Sid's death til after his funeral, where my dad delivered the eulogy. Sid had always been a great source of encouragement and inspiration for me. We used to travel to ANOS meetings together when I was still at school (I actually introduced him to ANOS Sydney Group!) and he gave me my first reference when I finished high school. We also shared numerous orchids over the years. Our sympathy goes to his devoted wife Gwen and the extended Batchelor family. Sid was a true gentleman and will be sorely missed, but his legacy will live on in the many fine plants be developed, registered and shared with the orchid world, both here and overseas.

David P. Banks, Editor

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The Orchadian

Official Journal of The Australasian Native Orchid Society Inc.
Founded August 1963
www.anos.org.au
Dedicated to the Study and Conservation of Australasian Native Orchids
Print Post Approved PP239628/00002, ISBN 0474-3342
Patron; Walter T. Upton

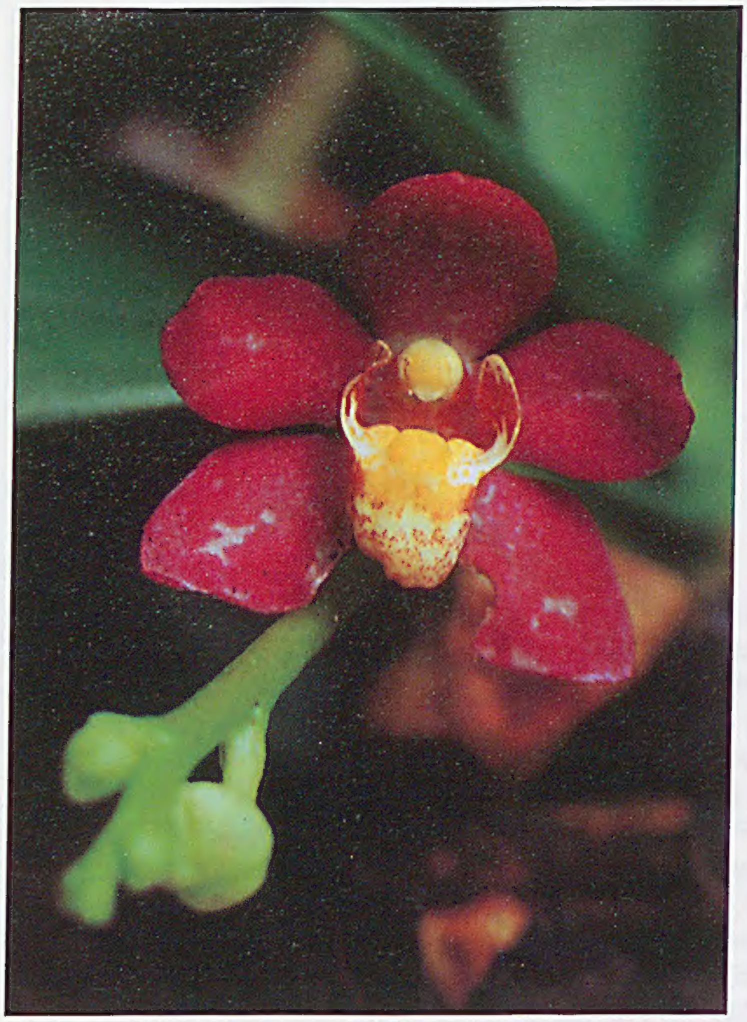
CONTENTS
Volume 13 Number 6

Features

Editorial on Sid Batchelor ... D.P. Banks 242
Sarcochilus Hybrids - Where Next? ... F. Vernon 245
The Future of *Sarcochilus* Breeding ... F. Simpson 246
Thelymitra spiralis - "Curly Locks" ... R. Heberle 252
Vale - Sid Batchelor (1929 - 2000) ... M. Harrison 253
Four New Names in *Caladenia* ... D.L. Jones 255
The Recovery of *Pterostylis gibbosa* ... G. Bradburn 258
New Australian Native Orchid Hybrid Registrations ... 260
The Dipodiums of South Australia and Victoria ... R. Bates 262
4th ANOS Conference & Show - An Event to Remember T. Slater 266
A Bit About Watering Those Orchids ... G. Walsh 269
Ira Butler Trophy Winners for 2000 ... 271
Nomination of Helen Richards for the R.D. FitzGerald Trophy ... ANOS (Victorian Group) 272
Cultivation of *Pterostylis*, the "Greenhoods" ... H. Richards 280
4th ANOS Conference & Show - Another Perspective M. Corrigan 284
ANOS Directory ... 287

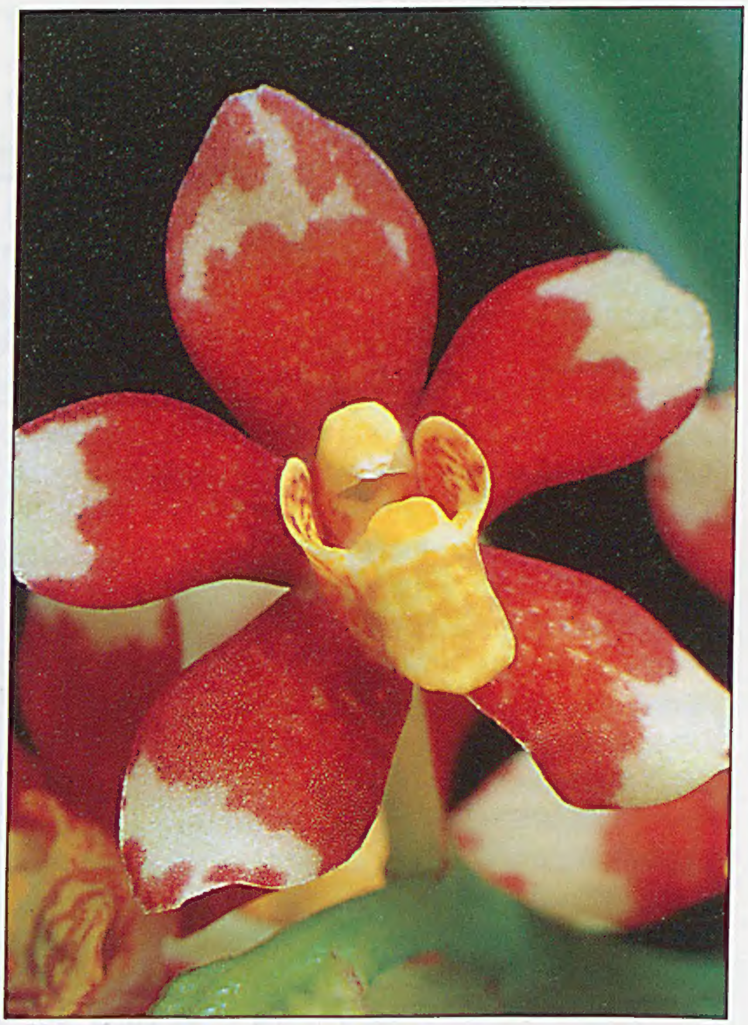
Colour Photographs

Dipodium roseum & *Dipodium campanulatum* ... Front Cover
Sarcochilus Velvet (2 clones) ... 244
Sarcochilus First Light ... 244
Sarcochilus (Heartlight x Fitzhart) ... 244
Thelymitra spiralis (pink form) ... 250
Thelymitra (*spiralis x variegata*) ... 251
Dipodium roseum ... 261
Dipodium pardalinum ... 261
Dipodium punctatum ... 264
Dipodium campanulatum ... 264
Dipodium hamiltonianum ... 265
Dipodium variegatum ... 265
Dipodium sp. aff. *pardalinum* ... 265
ANOS Conference, Helen Richards and Murray Corrigan ... 268
Pterostylis curta ... 278
Pterostylis X ingens ... 278
Pterostylis torquata ... 278
Pterostylis coccina ... 278
Pterostylis obtusa ... 279
Pterostylis robusta ... 279
Pterostylis tasmanica ... 279
Pterostylis turfosa ... 279
Pterostylis baptistii ... 285
Pterostylis sp. aff. *barbata* ... 285
Thelymitra spiralis ... Back Cover



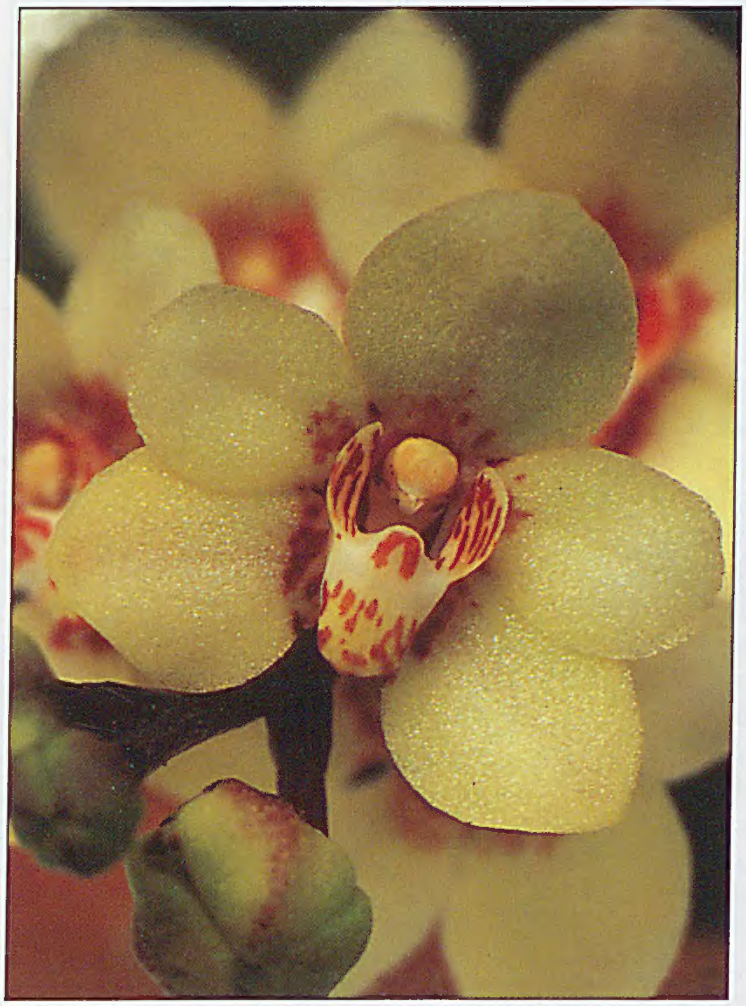
F. Vernon

Sarcochilus **Velvet**



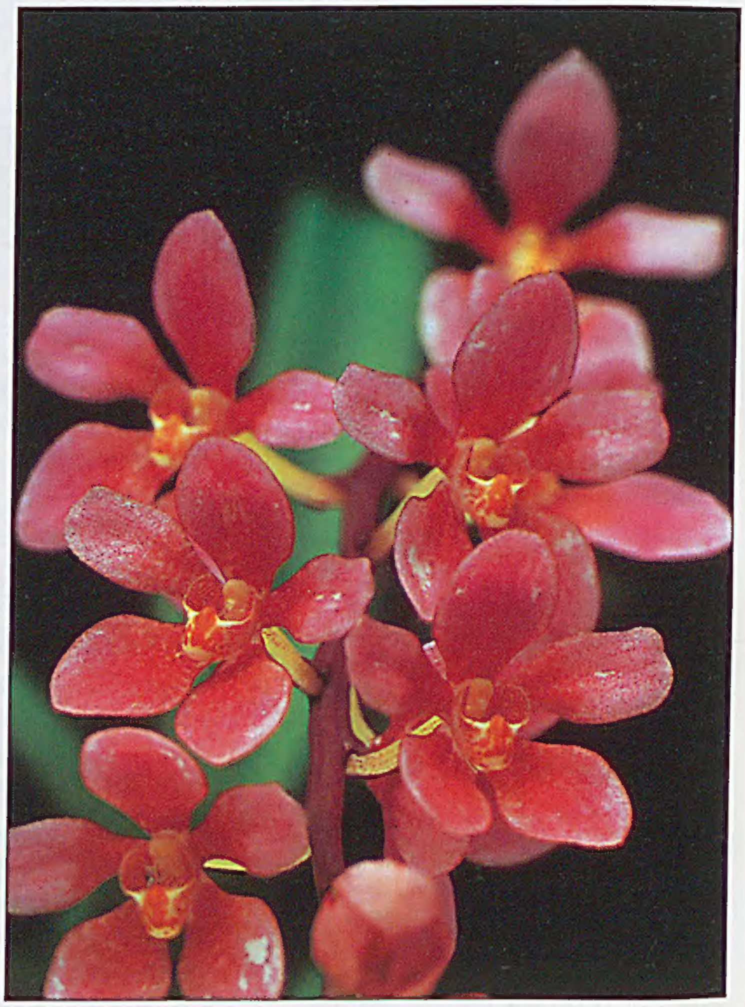
F. Vernon

Sarcochilus **Velvet**



F. Vernon

Sarcochilus **First Light**



F. Vernon

Sarco**. (Heartlight x Fitzhart)**

Sarcochilus Hybrids – Where Next?

Frank Vernon
Kalamunda W.A.
Email : hanfran@multiline.com.au

Over the past 20 years that I have been growing these delightful Australian Native Orchids I have seen them develop to a degree where they now offer the grower a vast range of colours. My collection now totals some 600 plants, only three of which are in 15" (38cm) saucers – the majority being in 100mm to 200mm shallow terracotta pots. I find these pots suit my cultural methods well although plastic pots are usually used. The main essential is that the pots are shallow and extremely well drained and that the mix is very open, easily draining, and without dust or other detritus.

Sarcochilus grow well with *Cymbidiums* and other compatible genera such as Australian *Dendrobiums* and the conditions I have described in my little book *Cultivating Australian Native Dendrobiums in Perth* suit this genera well. They do appreciate a little more shade than Cymbidiums or Dendrobiums and also being kept a little drier in winter. Keep them moist but do not over-water them – being allowed to almost dry out between watering permits air to circulate around the roots and this is most important.

Now that more and more species are being used by hybridisers and line-breeding is improving the more popular species such as *S. hartmannii, S. fitzgeraldii, S. falcatus,* and *S. ceciliae* I believe the future for these delightful little orchids is very bright indeed. For those readers who would like to start growing these orchids or would like to extend their collections I would suggest that they look firstly to the line-bred species mentioned above.

Hybrids are a very different proposition as the choice here is immense. Species that have imparted lots of colour and other desirable attributes are *S. fitzgeraldii* for reds, *S. australis* (not often used) gives cream/p ale yellows or pinks depending on the other parent, *Sarc dilatatus* – this little used species could be the one that will unlock the long searched for true yellows, *S. serrulatus* for brick red to brown, *S. spathulatus* appears to have a deep gene pool giving colours from purple to a greeny yellow and could perhaps be the source of green genes. *S. weinthallii* exports its spots to its progeny while *S. hirticalcar* not only seems to have a valuable gene pool but also imparts its habit of flowering several times a year when used as a parent.

Some of the more complex hybrids are proving to be a bit of a mixed bag. While some are very desirable, others have proved rather disappointing, showing little or no improvement over their forebears. Of the better complex hybrids I have found *S.* Velvet (Nicky x Riverdene), *S.* Rosie Glow (Verolica x Fitzhart), *S.* Bobby Dazzler (Pinkhart x Riverdene), *S.* Burgundy on Ice (Judith x Fitzhart), together with some recent and as yet unregistered crosses like *S.* Heartlight x Fitzhart, and *S.* (Pinkhart x Lois) x Fitzhart have all produced some lovely flowers for me.

Perhaps the area to look at is where the hybrids have been back-crossed to one of the original species, or where another species has been introduced, in some of the better known hybrids. Examples of these crosses giving very good results are *S.* Hot Ice x *fitzgeraldii, S.* Ruby x *ceciliae, S.* Aussie Weinman (Weinhart x *hartmannii*), *S.* Davey Woolf (Fitzhart x *weinthallii*), *S.* Empress (Lois x *ceciliae*), *S.*Melody (Melba x *fitzgeraldii*), *S.* Polka Dot (Pinkhart x *hirticalcar*), *S.* Tin Yin Lara (Melody x *fitzgeraldii*), and *S.* First Light (Aussie Dawn x *hartmannii*).

For anyone with restricted space or for those growers who want to experience something a little different, *Sarcochilus* is a very rewarding genus. With careful choice you can have these orchids in flower for 12 months of the year, although the main flowering period is generally September/October. I am writing this article in May and have in flower *S.* Flirt (Riverdene x *hartmannii*) which first opened in December and *S.* Southern Cross (*hartmannii x australis*) which opened a week ago. Many others are already in spike and I shall have a selection in flower permanently.

Over the past 20 years that I have been growing these delightful Australian Native Orchids I have seen them develop to a degree where they now offer the grower a vast range of colours. My collection now totals some 600 plants, only three of which are in 15" (38cm) saucers – the majority being in 100mm to 200mm shallow terracotta pots. I find these pots suit my cultural methods well although plastic pots are usually used. The main essential is that the pots are shallow and extremely well drained and that the mix is very open, easily draining, and without dust or other detritus.

So what does the future hold for these lovely orchids? Are we going to see bigger and bigger, rounder and rounder *S. hartmannii* and *fitzgeraldii*? Is 'bigger' 'better'? Are we going to lose the charm and, dare I say it, cuteness of the epiphyte influenced *Sarcochilus*? Will we be offered just more of the same whites, reds, and pinks (and combinations of these colours) or can we look forward to true, bright yellows, clear, true greens? Can we perhaps even anticipate polychromes? Will we be able to keep the open, and to many appealing, shape of flowers influenced by *Sarcs. dilatatus, australis, serrulatus* etc.?

Whatever the future brings I am confident the charm and appeal of the Australian *Sarcochilus* orchids will not fade for me!

Try some of these lovely, small, easy-to-grow orchids and, like me, you will be totally captivated.

✿

****

The Future of *Sarcochilus* Breeding

Frank Simpson,
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Email: simorch@caboolture.net.au

Sarcanthinae (the genus *Sarcochilus* and its relatives) breeding has not yet reached 40 years of age. Yet it is not surprising to hear comments like "Where has all the colour gone?" "Why aren't the flowers larger?" "Which hybrids do we buy to get those large deep coloured filled in blooms?"

The answer? Please be a little patient, as we are working in a largely unknown field. To be quite blunt - we have hardly scratched the surface. At this time we are not going to get many large filled in deep rich colours. I feel those will come in future generations with a lot of thought, dedication and hard work and time!

However we do know that *Sarcochilus hartmannii* will produce larger filled in blooms but it has setbacks. For instance, progeny take longer to mature and the plants are much larger before flowering for the first time. Colour often disappears altogether or is watered down so as to become at times quite unattractive. Some of the new line bred *S. hartmannii* will hopefully get away from this undesirable trait.

Sarcochilus fitzgeraldii certainly produces colour - sometimes too much. It may sound a strange thing to say particularly when the cry is for "more colour", but the fact of the matter is that many *S. fitzgeraldii* hybrids late in the season produce a fair amount of "loose" colour. This occurs mainly towards the tip of the inflorescence. Sometimes as much as three quarters of the raceme is affected. The blooms begin to open with a few "normal" flowers - white with the characteristic red centre. Then "hey presto" the next flower is pink or combinations of red or pink blotches, which can continue right down till the last flower is open. This varies from sometimes even a part of one flower being pink on a raceme to solid red for some flowers on the same spike. There does not seem to be a pattern to this "loose colour" and it does not follow in successive flowerings. It does however seem to be mainly a late season trait. One theory is later blooming occurs in warmer weather and this apparently is the trigger to release this undesirable problem for showbench growers as it is frowned upon by judges because of inconsistency of colour.

Sarcochilus falcatus has become a very desirable parent, which strangely was largely ignored for many years following the popular *S.* Melba (x *Sarcochilus hartmannii*) in 1966. This species has a wonderful gene bank and colours like red, pink, purple, yellow and various mustards have occurred in the progeny. Some very beautiful colour combinations and in some instances perfume comes through and this is a bonus as most *Sarcochilus* hybrids lack fragrance.

Sarcochilus weinthalii has been a very successful parent and progeny from this little gem have often produced myriads of spotting in red, purple and browns. *S.* Weinhart (x *Sarcochilus hartmannii*) was made in 1970 and many have come along since, and I feel many more very colourful hybrids are still to come. There are many second-generation hybrids to flower in the next season or two and who knows what's in store?

Sarcochilus spathulatus (previously *Parasarcochilus spathulatus*) is a real surprise packet. It was used to make *Parachilus* (now often referred to as *Sarcochilus*) Perky (x *Sarcochilus hartmannii*), which was made 1972 and mostly was cream to pale green. A further 19 years elapsed before *Parachilus* (*Sarcochilus*) Tigress (x *Sarcochilus* Fitzhart) was registered and a steady trickle of hybrids since. The real success story was *Parachilus* (*Sarcochilus*) Tigersun (Tigress x Fitzhart). The progeny ranged in colour from ice green, watermelon pink, olive with maroon blotching, various shades of gold and well-marked Indian red. The first batch of seedlings achieved numerous awards, including both HCC (Highly Commended Certificate) and AD (Award of Distinction). Needless to say the current remake using the same parent plants is creating lots of interest as they approach flowering size.

Sarcochilus hirticalcar (previously *Parasarcochilus hirticalcar*) has certainly made its presence felt after a long delay from 1976 when *Parachilus* (now *Sarcochilus*) Riverdene (x *Sarcochilus hartmannii*) came on the scene. Many very beautiful compact long flowering hybrids have been produced in recent years and once again the prediction is lots more to come in the future. There is a certain amount of confusion regarding the names with most calling these two species and their hybrids *Sarcochilus*, even though Royal Horticultural Society still insist that hybrid registrations be called *Parachilus* (*Sarcochilus* x *Parasarcochilus*).

Plectorrhiza tridentata has been successfully bred with *Sarcochilus*, the first being *Plectochilus* Richard Jost (x *Sarcochilus hartmannii*) and *Plectochilus* Rumrill (x *Sarcochilus ceciliae*) in 1976. And, you guessed it, another long gap before more were made. These hybrids are increasing in popularity both because of then compact plant size with hosts of blooms and most have a glorious perfume. *Plectorrhiza brevilabris* so far only one hybrid registered. *Plectochilus* Brodie Vincent (x *Sarcochilus falcatus*), which is a very desirable bloom. To date *Plectorrhiza brevilabris* is an extremely difficult species to get to produce viable seed but more will arrive in the future.

Peristeranthus hillii has loads of potential and has been largely overlooked probably because of small bloom size. There is only one hybrid registered to date (in 1996) and this created a new genus *Peristerchilus. Peristerchilus* Olive Grace (x *Sarcochilus falcatus*) is the first of what I feel will be a very long line of descendants. It produces long pendulous racemes up to 300 mm carrying up to 30 blooms mostly in the pale mint green. Sometimes a lilac mist overlay with purple stitching and - wait till you smell it!

Rhinerrhiza divitiflora is a large epiphytic species. Even though inflorescences can be up to 700 mm long the flowers are very short lived often lasting only a day or two. The first hybrid *Rhinochilus* Dorothy (x *Sarcochilus hartmannii*) was made back in 1965 and there was a long break before much was done with this unique species. The progeny often produce long spikes up to 700 mm with colourful spidery blooms. One very pleasing aspect is that flowers last up to 2 weeks although my thoughts are if the hot weather comes before they open there is the tendency to open sporadically along the raceme. Rich canary yellows with orange marking are quite common colours along with cream some white and rarely pink occurs.

When reminiscing about *Sarcochilus* breeding one name stands out, Walter T. Upton. Wal started the ball rolling again in the 1980's after a lengthy time lapse from where the late Ira Butler left off. Wal really put *Sarcochilus* breeding back on the rails again and also wrote the popular *Sarcochilus Orchids of Australia*. I feel if it weren't for his efforts, there wouldn't be the interest in these wonderful plants that there is today.

✿

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AUSTRALIAN ORCHID RESEARCH

AUSTRALIAN ORCHID RESEARCH
VOLUME 3, 1998
Contributions to Tasmanian Orchidology 1-9
AUSTRALIAN ORCHID FOUNDATION

is an occasional publication dealing with the results of scientific research into Australian Orchidaceae. It is published periodically when suitable material comes to hand. All publications are reviewed by at least two botanical specialists and edited prior to publication.

Three volumes have been published to date:-

Volume 1, 1989.,
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Volume 3. 1998.,
***Contributions to Tasmanian Orchidology*, David L. Jones.**

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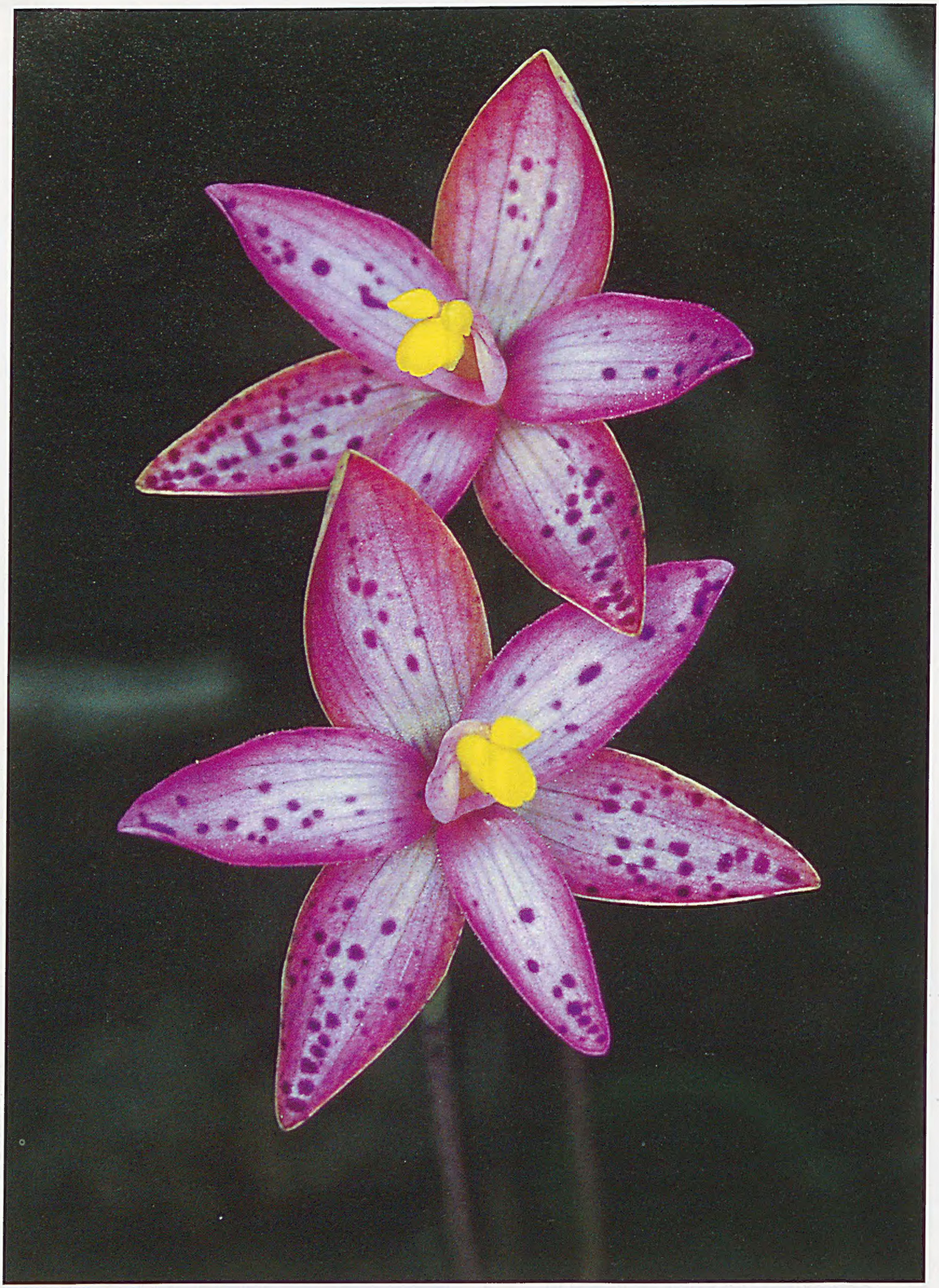
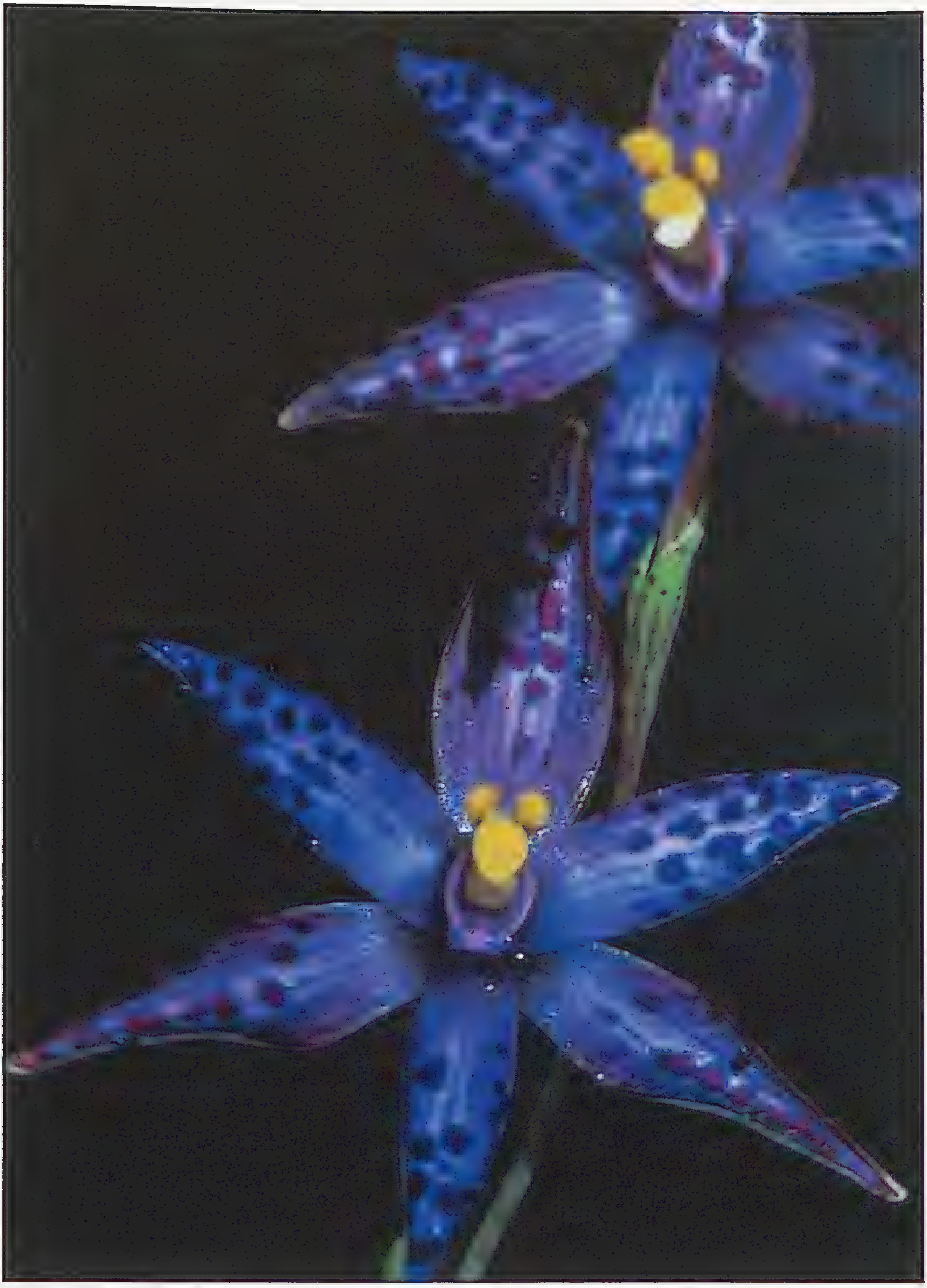


Viv Holly

Thelymitra spiralis

Pink spotted form from East of Katanning, Western Australia



Ron Heberle

Thelymitra (*spiralis* x *variegata*)

Probable natural hybrid from 17km East of Albany, Western Australia

Thelymitra spiralis (Lindl) F.Muell - "Curly Locks"

Ronald L. Heberle
78 Campbell Road, Albany WA 6330

This unique species has the rare distinction where both the species and common name are beautifully descriptive making positive identification a matter of course. This paper has been written to cover some of the complexity of the species, *Thelymitra spiralis.*

This species, closely related to *T. variegata, T. apiculata* and *T. matthewsii* with the spirally twisted "corkscrew like" narrow leaf was originally named by Lindley (1839) as *Macdonaldia spiralis.* This was from a collection by James Drummond, colonial botanist at the Swan River Colony (as Western Australia was known at that time).

Mueller (1865) changed the generic name and included it under *Thelymitra.* Nicholls (1949) subsequently named four varieties of *T. spiralis* : var. *pulchella*, var. *punctata*, var. *pallida* var. *scoulerae.* The former, *T. spiralis* var. *pulchella*, was the only one to survive the revision by Clements (1989).

So after a somewhat fragmented taxonomic history we have just two valid taxa *T. spiralis* var. *spiralis* and T. *spiralis* var. *pulchella.* The latter was a collection by Rica Erickson from Bolgart, north of Perth. This lady is a renowned botanical artist and writer of books and papers, possibly her greatest success was the publication of *Orchids of the West*, a former benchmark and now a collector's item. She was also responsible for the perceptive name "Curly Locks".

The species complex is widely distributed over a vast area as shown by Hoffman & Brown (1992) with disjunct populations in the Kalbarri - Murchison River area in the north and a very significant coverage from south of Perth arcing up into the central wheat belt then south easterly to between Esperance and Israelite Bay embracing all the south west corner of the State. These authors in their summary suggested that the species had a confused history, is widespread with a sporadic distribution. I agree with most of this, however, in my experience in the Albany - Great Southern and the eastern wheat belt the species can be quite numerous "in the right year".

Broadly there are two distinct groups within the inland and coastal populations. The southern forms extending from the coast to approximately 100kms inland have small flowers predominantly all shades of blue; some are bi-coloured with speckling and blotching of a different colour. The typical narrow corkscrew like leaf is conspicuous. Conversely the crest at the back of the column base is very hard to see. They have a preferred environment and grow along watersheds and seepage areas around swamps, lakes and rivers, and have a preference for black sandy soil in open forest country with a tolerance for sedges and rushes where they often choose to grow. This group appears to have adapted to climatic conditions prevailing during the July-August flowering season and are able to expand their segments with ambient temperatures of 17-20°C under favourable conditions. Cloud cover and inclement weather can retard or inhibit flowers opening, as these self-pollinating species will pollinate in the bud and never open.

The inland forms have larger flowers, a greater range of colour, mostly all shades of pink with speckling and blotching similar to the coastal forms. Leaves can be corkscrew or have a wide spiral of two or three with some nearly straight, they do not appear to be self pollinating and have a preferred habitat of sand or loamy soil in open forest country and thrive in flat country and depressions that have dried out after winter rains, they also can be found in environments similar to coastal forms around the perimeter of granite rocks. They flower in August-September at 20-30°C and have long lasting flowers depending on climatic conditions.

Pollen can be mealy or cohesive with a group close to the Albany town site having a radical departure where pollen is exuded in a viscous semi-liquid mass and covers the large stigmatic plate, after some 30 minutes this has shrunk and dried now ringing the outer edge of the stigma in a hard biscuit-like deposit with a few wisps extant.

This strong colony is flowering on fragmented sheets of ironstone (laterite) that once supported a Jarrah Casuarina forest, the area was bulldozed to establish a gravel pit, this was later aborted. *T. spiralis* has colonised the area with tuberoids growing in cracks and indents in the ironstone covered by a thin layer of soil and moss. I have not seen this phenomenon elsewhere.

Vegetative reproduction is most likely caused by seeds falling straight down and germinating around the parent plant. I have cultured the species and have seen no sign of tuber multiplication. The species cultures fairly easily and will persist in a pot for up to five years. The southern coastal species self-pollination and short-lived flowers offer little potential.

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Vale - Sid Batchelor 1929 - 2000

With the passing of Sid Batchelor on 5th September 2000, the Australian orchid community lost one of its icons. Sid was known throughout the nation as an outstanding breeder of Australian native orchids, and his influence in this field cannot be overstated. The plants he produced will continue to win shows and awards, and will also figure prominently in breeding lines for years to come. Sid will not be forgotten quickly, and orchid people will mourn his loss both here and overseas.

Joining the fledgling society in 1963 as an ANOS Foundation Member, Sid Batchelor made a lasting contribution to the culture and breeding of Australian native orchids. He was a wonderful ambassador for ANOS, and everywhere he went he would promote the Society and its aims. He was a core member of the ANOS Judging Panel, and for three years he served as ANOS Registrar of Judges. In 1999 Sid was awarded Life Membership of ANOS.

ANOS Sydney Group was Sid's "home" society, and he took great pleasure in simply attending meetings and shows, and enjoying the friendship of his fellow members. In spite of his high profile reputation, Sid remained easily approachable and genuinely helpful, treating both friends and newcomers with courtesy and warmth. He was a Life Member and was also Patron of ANOS Sydney Group, and he was remarkably generous in his support of the Group's activities. Sid's natural modesty prevented him from realising it, but by his involvement, he brought great prestige to ANOS Sydney Group.

Sidney Albert Batchelor was born at Baulkham Hills, in Sydney, on 27th June 1929, and was the eldest of three children. He lived his entire life in the area, never moving more than a few streets away from his childhood home. As a young man he trained and worked as a builder, before joining the NSW Police Force in 1956, where he eventually rose to the rank of Sergeant 2nd Class. He served at a number of western suburbs stations, including Parramatta, Merrylands and Castle Hill, but a chronic spinal injury forced his early retirement in 1982. On

7th February 1953, he married Gwen and they moved into their Woodlands Street home, which Sid built himself prior to the wedding. Together, they raised four children, Kevin, Karen, Lesley and Jenny, and in later years were blessed with eight grandchildren.

Sid was not a complicated man, and he took a straightforward and down-to-earth approach to life. His innate honesty and integrity of character guided him in everything he did, and he had an unfailing ability to quickly distinguish between sincerity and sham. He was a perfectionist, but not in a difficult or obsessive way. He just wanted to do things as well as he could, and he went to great lengths to achieve his aims. His nursery, known simply as "Yondi", was a picture of perfection, for underpinning everything he did with orchids; Sid was a skilled grower, with the knack of cultivating and flowering his plants to their best potential.

Sid had always grown orchids, as did his father before him, and for more than a few years he maintained a large collection of export-quality cymbidiums. He went on to develop an interest in cattleyas and laelias, as well as other miscellaneous genera, but by the mid-1970's Sid had been captivated by the beauty and charm of Australian native orchids. Deciding he wanted to undertake a breeding programme, Sid first established a collection of the finest native species and hybrids, which he continually updated, and then set about developing a micro-propagation laboratory. Through trial and error, he eventually formulated a flasking technique second to none, and the quality of his product became the benchmark in this country, as well as overseas.

His approach to breeding, whether creating hybrids or improving the species, was precise and visionary. For Sid, there was no such thing as making a cross just because two plants happened to be in flower at the same time. He thought carefully about what he wanted to achieve, and how best to do it, and it was not uncommon to hear him talk about his intentions for next year or the year after. He worked to a definite plan using only the best parent stock, and the "Yondi" name became synonymous with quality in native orchids. In 1993, Sid was presented with the Ira Butler Gold Trophy for Outstanding Achievement in the breeding of Australian native orchid hybrids, and amongst all the awards, trophies and championship prizes he had accumulated; it was this trophy that meant the most to him.

Sid's strength of character and mind were matched by his physical bearing. He was a tall, imposing figure, possessed of great physical strength, and yet in every sense of the word, he was a gentleman. He had a wonderful sense of humour and enjoyed nothing more than being out in the nursery, talking orchids with a couple of friends. For a number of years we had a standing arrangement to meet for lunch on Wednesdays. Gwen would always put on a great meal (her roast dinners were legendary) and then we would retire to the orchid house, where Sid would point out some of his new hybrids, or show off a rare species he had acquired. They were the best of times.

In his final 18 months or so, Sid became too ill to attend meetings, and he was confined to bed for extended periods. He still enjoyed visits from friends, and although his mental powers were never diminished, it became more and more of an ordeal. His determination and fighting spirit kept him going long beyond expectations, but finally he was at rest.

Sid was one of those rare individuals who combined great talent with great modesty. His remarkable generosity of spirit and intellect provided the basis for an exemplary life, and there was no one for whom I had a greater regard. His memory will live on not only in the lovely orchids he created, but also in the hearts and minds of those who were privileged to know him.

Michael Harrison,
North Wilberforce, NSW

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Four New Names in *Caladenia* R.Br. (Orchidaceae), and a note on *C. carnea* var. *subulata* Nicholls

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Caladenia capillata is a new name for *Caladenia filamentosa* R.Br. var. *tentaculata* R.S.Rogers and new combinations at species rank are made for *Caladenia carnea* R.Br. var. *ornata* Nicholls, *Caladenia carnea* R.Br. var. *gracillima* Rupp and *Caladenia carnea* R.Br. var *attenuata* W.Brinsley. *Caladenia carnea* R.Br. var. *subulata* Nicholls is considered to be an aberrant mutant.

Continuing studies into *Caladenia* have shown the following four taxa to be distinct and worthy of recognition at species rank. The necessary taxonomic changes are here effected. A note on the status of *Caladenia carnea* var. *subulata* Nicholls is also included.

Taxonomy

1. *Caladenia capillata* D.L.Jones, nom. et stat. nov.

Basionym: *Caladenia filamentosa* R.Br. var. *tentaculata* R.S.Rogers, *Fl. S. Austral.* (ed.1) 1: 138 (1922). Type: South Australia: Caroona Hill, towards Gawler Ranges, Aug. 1889, *W.Cleland* s.n.(holo AD!).
Syn. *Caladenia tentaculata* Tate, *Trans. & Proc. Roy. Soc. South Australia* 12: 130 (1889), *non* Schldl. (1847).

Illustrations: (both as *Caladenia filamentosa* var *tentaculata*); Plate 43, Bates & Weber (1990); page 74, Backhouse & Jeanes (1995).

Distribution and Ecology

Occurs in south-western New South Wales, Victoria and South Australia, including Kangaroo Island. Grows in a range of habitats including coastal scrub on limestone, calcareous sand on stabilised dunes, mallee shrubland and broombush in sand and sand over limestone and, less commonly in heathy forest and woodland in sands and sandy loams.
Flowering period: July to October.

Notes

A new epithet is required since '*tentaculata*' is occupied at specific rank by *Caladenia tentaculata* Schldl. *Caladenia capillata* has been recorded from Western Australia (for example Bates & Weber 1990), but that taxon, which has a different labellum with larger, prominent marginal teeth and longer lamina calli, is to be named separately (Hopper & Brown in Hoffman & Brown 1998).

Caladenia capillata is closely allied to *C. filamentosa*, which was described from Tasmanian specimens, but the latter species has larger flowers, usually of a dark red colouration and a larger labellum with broad marginal teeth and broad lamina calli. Usually, at least in Tasmanian specimens, the lateral sepals and petals are drooping, but in some Victorian specimens the petals are erect as in *C. capillata*. Additionally in some Victorian localities, mixed red and cream flowering plants occur. Cream-flowered plants of the latter species can be difficult to distinguish from *C. capillata* however, they are usually larger flowered with a larger labellum having broad marginal teeth and broad lamina calli. *Caladenia flaccida* has much larger flowers than *C. capillata* with spreading to drooping segments. *C. capillata* is usually readily recognised by its greyish cream to creamy white flowers, which have remarkably filiform, thread-like tips to the sepals and petals. The flowers are usually relatively small and have a proportionately small, almost triangular labellum. This taxon exhibits some variation (see Bates & Weber 1990), which may be recognised after further study.

Conservation Status

Widely distributed, common and well conserved.

Etymology

From the Latin *capillatus*, thread-like, hair-like, in reference to the fine tips on the perianth segments.

2. *Caladenia ornata* (Nicholls) D.L.Jones, comb. et stat nov.,

Basionym: *Caladenia carnea* R.Br. var *ornata* Nicholls, *Victorian Naturalist* 62: 61, figs G-J (1945). Lectotype: (here chosen).

Illustrations: (both as *Caladenia carnea* var. *ornata*) Plate 221, figs k-m, Nicholls (1969); page 62, Backhouse & Jeanes (1995).

Distribution and Ecology

Apparently restricted to western Victoria where known from a few sites in the western goldfields, the Grampians and the Portland district.

Flowering period: October.

Notes

Distinguished from *Caladenia carnea* by its relatively broad, blunt perianth segments and broadly rounded labellum lateral lobes. The lateral sepals are often, but not invariably, fused at the base and the plants sometimes grow in tufts or clumps. Flower colour is usually pink and the labellum red to reddish with a yellowish mid-lobe.

Typification

There appears to be no type specimens of this taxon at MEL and the drawing by Nicholls in the *Victorian Naturalist* 62: 61, figs G-J (1945), based on specimens collected at Gorae via Portland, Victoria, Oct. 1943, *C.Beauglehole* s.n. is here selected as the lectotype. A second depiction is also shown on Plate 221 (figs k-m) in *Orchids of Australia* (complete edition), published in 1969 by Thomas Nelson, Australia, Ltd.

Conservation Status

Of restricted distribution but conserved in one National Park and one state park; Backhouse & Jeanes (1995) suggest 3vc-.

3. *Caladenia gracillima* (Rupp) D.L.Jones, comb. et stat nov.,

Basionym: *Caladenia carnea* R.Br. var. *gracillima* Rupp, *Queensland Naturalist* 11(4): 86-87, fig. (1940). Type: Queensland: Yandina, *N.McKie* s.n. (holo NSW!).

Illustration: (as *Caladenia carnea* var. *gracillima*) *Queensland Naturalist* 11(4): 86 (1940).

Distribution and Ecology

Apparently restricted to the Blackall Range in south-eastern Queensland, but sometimes locally common (R.Crane pers. comm.). Grows in open forest and woodland among shrubs, forbs and grass in well-drained gravelly loams and clay loams.

Flowering period: August and September.

Notes

An attractive species which can be recognised by its bright pink flowers with acuminate tips on the perianth segments, a cuneate labellum with relatively short, narrow lateral lobes and a long narrow mid-lobe with a bright yellow to orange apex. The labellum usually lacks transverse bars but prominent dark red transverse bars occur on the anterior surface of the column.

Conservation Status

Of restricted distribution and not known to be conserved; suggest 2R according to Briggs & Leigh (1996).

4. *Caladenia attenuata* (W.Brinsley) D.L.Jones, comb. et stat nov.,

Basionym: *Caladenia carnea* R.Br. var *attenuata* W.Brinsley, *The Orchadian* 3 (2): 16, figs A-B (1968). Type: New South Wales: Crest of gravelly hills at about 200 ft, Durama, north of Bathurst, 28 Oct. 1964, *B.Whitehead, C.K.Ingram, P.Althofer* and *W.Brinsley* (holo NSW!).

Distribution and Ecology

Known only from the type collection and not relocated despite searches by several people. It is reported to grow in shrubby forest on the crests of ridges in gravelly soil. Flowering period: October and November.

Notes

A distinctive member of a group of small-flowered *Caladenia* which share some of the morphological features of *C. carnea*, such as red bars on the column and labellum. Members of the group are characterised by small flowers which are usually autogamous, short dorsal sepal and a broad labellum with proportionately large lateral lobes and a short mid-lobe. Because of their small size and short flowering period these orchids have been poorly collected and a number await formal recognition. *Caladenia attenuata* is distinctive within this group by virtue of its tall scape (to 24 cm), small (about 10 mm diam.), single white flower and entire or crenulate margins on the mid-lobe.

Conservation Status

Poorly known and in need of field studies to determine its distribution.

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A Note on the status of *Caladenia carnea* R.Br. var *subulata* Nicholls.

Caladenia carnea R.Br. var. *subulata* Nicholls, *Victorian Naturalist* 62: 61, figs A-F (1945). Lectotype: (here chosen).

Illustration: Plate 221, figs a-j, Nicholls (1969).

Notes

Concern has been expressed about the conservation status of this taxon, particularly whether it should be listed by conservation authorities (Neville Walsh pers. comm.). Backhouse & Jeanes (1995) give it the status of endangered. Examination of plate 221 Nicholls (1969) clearly shows that, apart from two basal calli, the flower lacks any calli on the rest of the labellum lamina and on the margins of the labellum mid-lobe. This fact combined with the labellum lateral lobes being strongly incurved around the column and the unusual erect attitude of the labellum mid-lobe, both features depicted by Nicholls in fig. g of the above plate, strongly suggests that the taxon is a localised teratological mutant. Such variants, which are not uncommon, have been accorded taxonomic status in the past (for example *Caladenia atkinsonii* Rodway, *Thelymitra murdochiae* Nicholls), but are doubtfully worthy of recognition and certainly not the expenditure of limited conservation resources.

Typification

There appears to be no type specimens of this taxon at MEL and the drawing by Nicholls in the *Victorian Naturalist* 62: 61, figs A-F (1945), based on specimens collected at Portland, Victoria, Oct.-Nov. 1913, *E.Mellblom* s.n. is here selected as the lectotype. A second depiction is also shown on Plate 221 (figs a-j) in *Orchids of Australia* (complete edition), published in 1969 by Thomas Nelson, Australia, Ltd.

Acknowledgements

I thank Jeff Jeanes, Mark Clements, Lyn Craven and Laurie Adams for commenting on the manuscript, the late Ralph Crane for specimens of *C. gracillima*, Bob Bates for discussions and specimens of *C. capillata*, Colin Bower for discussion about *C. attenuata* and Marion Garratt and Karina FitzGerald for technical assistance.

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The Recovery of *Pterostylis gibbosa*

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The efforts of ANOS to conserve *Pterostylis gibbosa* provide an ideal model for explaining the processes involved in the conservation of wildlife in New South Wales. During this time, *Pterostylis gibbosa* has gone from being a little known orchid with a confused identity to one of great importance in the creating of recovery strategies for rare and endangered species in NSW.

Brief History

Pterostylis gibbosa was first collected by George Caley in 1803 and described by Robert Brown. These were found in the Cumberland Plain near Parramatta. It was rediscovered at Yallah by Roy O'Meley in the 1940's but was incorrectly identified by Sydney Herbarium. In 1967 Brian Whitehead recorded the orchid on private property at Yallah and was regarded as a new species and named *Pterostylis ceriflora* by John Blackmore and Steve Clemesha in their 1968 review of the '*rufa*' group of *Pterostylis*. A small number of plants were found at Nowra in 1969 on land latter developed for housing.

The threat to the then named *Pterostylis ceriflora* was reported in the June 1982 edition of *The Orchadian* by David McAlpine. This article outlined the problem of its extremely limited habitat, as it was only known from a small area on private property. This area was likely to be developed and was being protected by a temporary conservation order by the Heritage Council of NSW. In the same year Mark Clements reduced *Pterostylis ceriflora* to a synonym of *Pterostylis gibbosa* named by Robert Brown. It was also the beginning of Wollongong and District Native Orchid Society's (now named ANOS Illawarra) involvement with the orchid.

Early attempts at Conservation

The only protection afforded *Pterostylis gibbosa* in 1982 was the Interim Conservation Order issued by the Heritage Council of NSW. Attempts were made to persuade the landholders to preserve some of the land where the orchid was found with such land coming under National Parks and Wildlife care. This did not eventuate and the Interim Conservation order was removed in 1988.

During 1983 and 1984 searches for *P. gibbosa* by Ron Tunstall and myself resulted in plants being discovered at Albion Park and the Elcom (now Transgrid) property at Yallah. Unknown at the time, botanical studies were taking place along the proposed coal conveyor belt that would pass through the Elcom property. That study identified the area as potential *P. gibbosa* habitat.

In 1987 the W&DNOS became aware of the likelihood of the coal conveyor belt being developed. A submission was written to Elcom outlining the significance of the uncleared habitat at Yallah. In 1988 the W&DNOS participated in the environmental study to determine the impact of the proposed Tarrawarra coal transport route, recommending that the conveyor belt could be built without harming the existing habitat. More important were recommendations stressing the need for ongoing management of *P. gibbosa*. With the lapse of the Interim Conservation Order in 1988, ANOS groups wrote letters to the NSW National Parks and Wildlife Service and State politicians to continue with the Conservation Order.

By 1990 the coal loader proposal was abandoned. However Elcom commissioned a management plan for *P. gibbosa* at Yallah. This included the input from the W&DNOS, NPWS and the University of Wollongong. This became the first Management Committee for *P. gibbosa* at Yallah. Over the next two years W&DNOS took on responsibility of reducing the serious weed invasion of *Lantana* and *Pittosporum* and takes gains a lease over the areas where the orchid is found. In 1992 Elcom is renamed Pacific Power. It is also the year in which the Federal parliament passed the *Endangered Species Protection Act 1992* and the formal process of recovery begins.

The process of recovery -
a. *Endangered Species Protection Act 1992 (Commonwealth)*

The existence of the *Endangered Species Protection Act 1992* created the obligation for action to be taken to protect rare species. Funding was provided to the NSW NPWS to research *P. gibbosa*, identify it's distribution and provide a plan for the recovery of the orchid. The NPWS initiated a study for the long-term conservation of the orchid in 1993. ANOS was involved by providing members with expertise to help prepare and review the draft document on the conservation of *P. gibbosa*. The final document was completed later that year. The Society's views are found throughout that report.

This process provided the opportunity for ANOS to develop strong links with the NSW NPWS that was to open the way for other endangered orchids to be included in the recovery process. The Commonwealth conservation strategy for *P. gibbosa* was implemented in 1996.

The recovery plan had to deal with ensuring that the habitat of the orchid would be secured and that the use of such areas was compatible with the orchids needs. Habitat problems included the need to gain the co-operation of private landholders at Yallah and Milbrodale (Hunter Valley), ensure that sporting usage at Albion Park did not encroach on the remnant vegetation (nor the proposed major road though the area), and ensure the ongoing co-operation of Pacific Power at Yallah. During 1995 the Yallah site came under the control of Transgrid.

In 1996 a formal recovery team was created, with representatives from ANOS, NPWS, local government representatives and the University of Wollongong. Part of the "*Pterostylis gibbosa* Species Recovery Team's" responsibility was to determine the actual distribution of *P. gibbosa*.

To achieve this (in 1997), surveying areas of potential habitat took place. During the year NPWS and ANOS NSW surveyed potential habitats with the aid of interested members from the various ANOS Groups. Areas surveyed were in Nowra, Western Sydney and Hunter Valley. Surveys began in June, continuing monthly to October. ANOS Illawarra hosted the first search at Nowra and despite the rain ended the day successfully by locating a significant new population. Over a hundred ANOS members from NSW and Victorian ANOS groups took part.

b. *Threatened Species Conservation Act 1995 (NSW)*

Under the Australian Constitution, the power to legislate the protection of natural resources including wildlife is a state matter. Therefore while Commonwealth legislation provided the funding for the recovery process state governments needed to implement their own legislation. The *Threatened Species Conservation Act 1995 (NSW)* provided an obligation to create a recovery plan and implement its recommendations.

The existence of a recovery plan places obligations on public authorities to ensure that their actions are compatible with the protection of the rare species. Of special importance in respect to any recovery plan is the declaration of critical habitat. Once declared, it becomes an offence to damage critical habitat and a species impact statement becomes mandatory for all developments and activities proposed within critical habitat.

So, is *P. gibbosa* protected and is it recovering? The following briefly summarises the 5 known sites.

Illawarra

In addition to the recovery plan for *P. gibbosa* in December 1999, the Scientific Committee, established by the *Threatened Species Conservation Act*, made a Final Determination to list the Illawarra Lowlands Grassy Woodland in the Sydney Basin Bioregion as an Endangered Ecological Community on Part 3 of Schedule 1 of the Act. This provides for protection of the areas and potential habitat where *P. gibbosa* is found.

1. Albion Park

Shellharbour Council, who have been co-operative in their actions to protect *P. gibbosa*, control this area. It is hoped that Shellharbour Council will enter into a Voluntary Conservation Agreement to protect the orchid. During the past nine years the population of *P. gibbosa* has increased tenfold. The major concern for the area is the excessive burning of the area due to arson.

2. Yallah (Transgrid Substation)
Transgrid has made a significant contribution to the conversation of *P. gibbosa* by constructing rabbit-proof fences to protect the orchid, excluding grazing, giving leasehold to ANOS Illawarra, sponsoring yearly monitoring of the orchid and supporting University of Wollongong student study projects on the orchid. It is hoped that either a Voluntary Conservation Agreement or Joint Management Agreement will be reached between NPWS and Transgrid. During the past nine years the population of *P. gibbosa* has increased approximately two hundred and fifty percent.

3. Yallah (Private Property)
Three private properties have (or did have) *P. gibbosa*. One of the property owners was interested on preserving the orchid but ownership has changed recently. At present, no long-term protection is likely.

Nowra

4. Currumbene State Forest - This is the most southern known site for *P. gibbosa* and was discovered during the search for *P. gibbosa* in 1997 by ANOS and the NPWS. The area is controlled by NSW State Forests and it is hoped that a Voluntary Management Agreement can be formed between State Forests and NPWS. The main concern is the Shoalhaven Council's desire to access this land for future urban development.

Hunter Valley

5. Milbrodale - This is the most northern known site for *P. gibbosa* and is in private hands. The owners have been helpful in allowing NPWS and ANOS access to the site for biological monitoring. The area is subject to grazing and off-road motorcycle events. The NPWS is continuing to discuss the management of the site with the owners.

Future

Pterostylis gibbosa has benefited by the development of Commonwealth and State environmental legislation. It is likely that the recovery process will provide for the long-term protection of the species.

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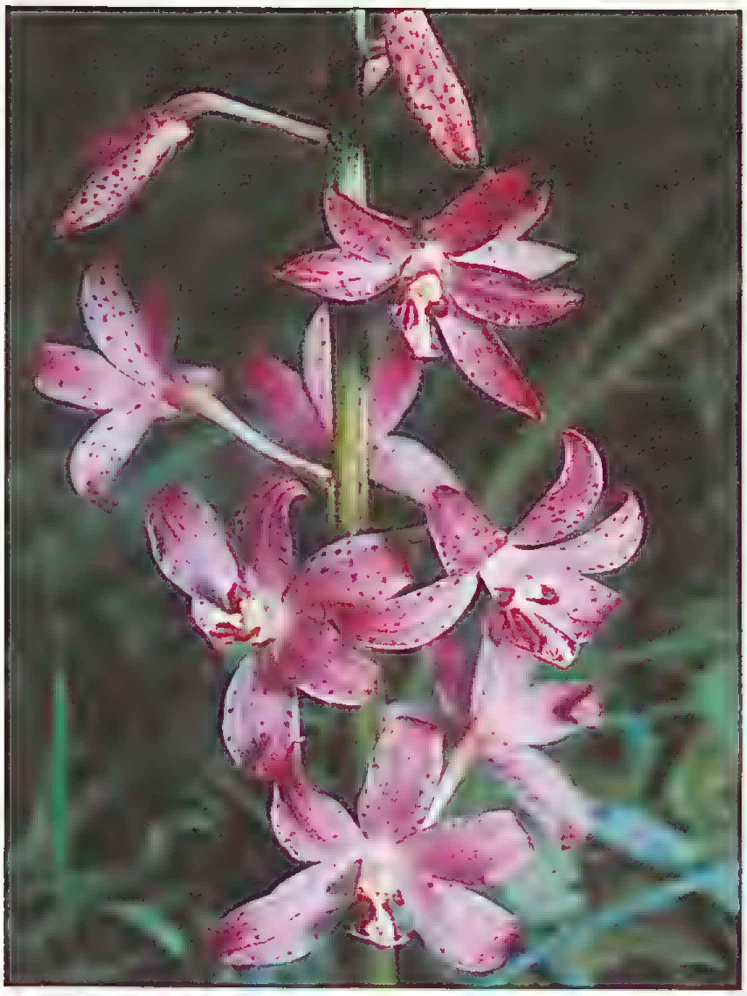
New Australian Native Orchid Hybrid Registrations

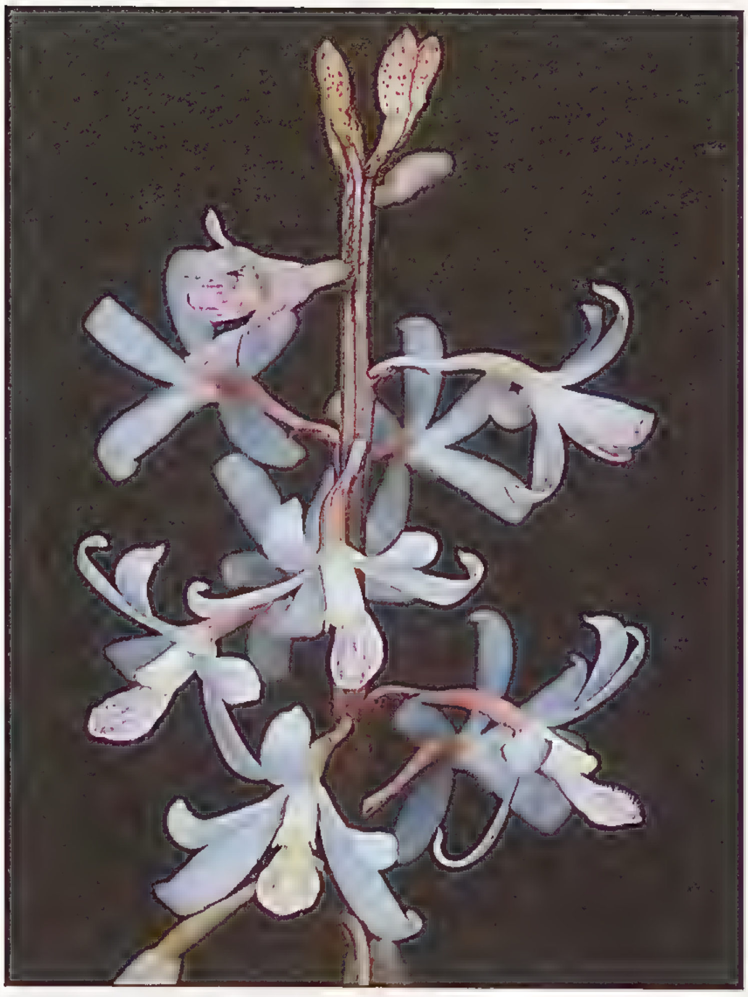
New registrations from the Royal Horticultural Society (abridged from *The Orchid Review*)
June - September 2000 registrations.

Name	Parentage	Registered by
Dendrobium		
Basil	Dainty Gem x *kingianum*	W. Fisher
Blushart	Elegant Heart x Rutherford Blushing Bride	Down Under Native Orchids
Daphne	Dainty Gem x Bardo Rose	W. Fisher
Enzed Exquisite	Jombock x Shelleen	D. Burgess
Grarose	Graham Hewitt x Kingrose	Down Under Native Orchids
Groster	Grarose x Peter	Down Under Native Orchids
Hilda's Heart	Elegant Heart x Hilda Poxon	P. & P. Wallis (W.T. Upton)
Memoria Alicia	Elegant Heart x Candice	Down Under Native Orchids



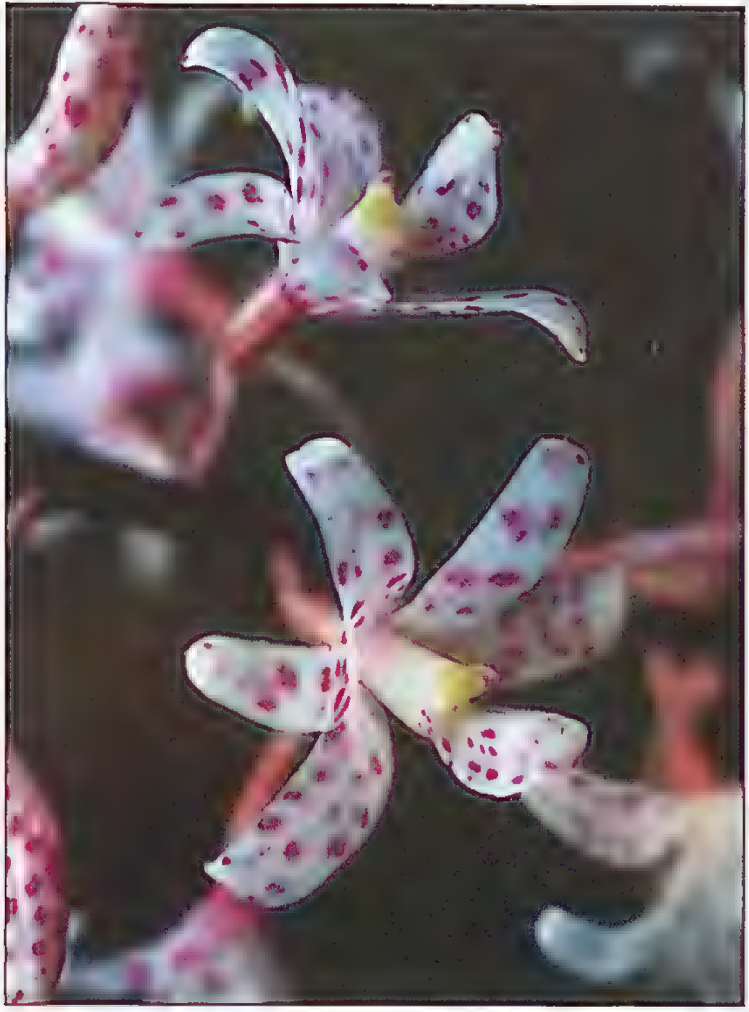
M. & K. Houston

Dipodium roseum
Unusual form - Adelaide Hills, South Aust.



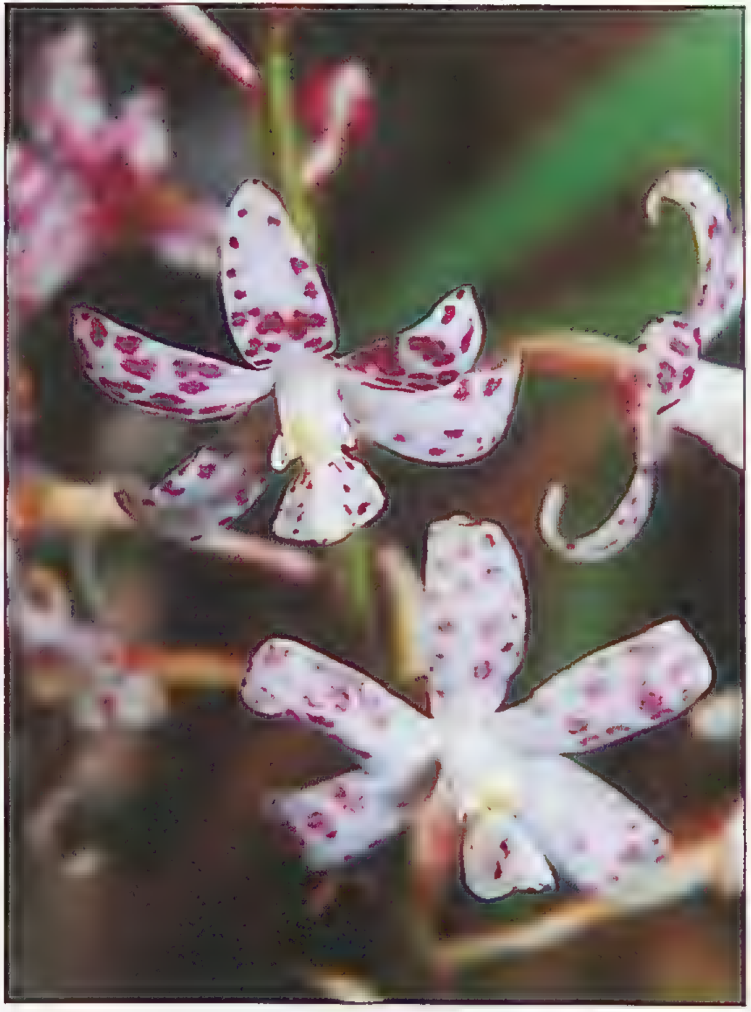
R. Bates

Dipodium roseum
Pale form with dark stem – Mylor, Sth.Aust.



R. Bates

Dipodium pardalinum
Caroline Forest, South Australia



M. & K. Houston

Dipodium pardalinum
near Adelaide, South Australia

The Dipodiums of South Australia and Victoria

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Dipodium is a large orchid genus extending from China through Malaysia, New Guinea, Oceania and Eastern Australia. Although *flowers* of most species are *similar* there is a remarkable polarity of plant habit.

In the tropics there are many leafy species, which may be either climbers or epiphytes. Although most begin their life on the ground, creeping gradually towards the nearest tree, climbing slowly, a little further each year until finally the soil dwelling part of the plant rots away and the *Dipodium* is now an epiphyte. The whole process takes years. The plants may even branch, lose their connection and go their own way so that several plants on adjacent trees may have begun life as one.

Then there are the leafless species. The species under discussion here from temperate Australia are all leafless saprophytes generally from Eucalypt forest, flowering in summer and can only be located when not in flower from the remains of flower spikes of previous seasons or by the asparagus-like tips of flower spikes to come.

Like most orchids the flowers are deceptive to insects. Native bees effect pollination. The bright colours, perfume, spots, stripes and other guidelines to gather pseudopollen and seek for nectar, attract these. But there is no nectar (at least not in the flowers) and instead of gathering the real pollinia they end up merely transferring it from flower to flower. All species are long flowering.

The deception mentioned above is not confined to pollination strategies. Nectaries of *Dipodium* are placed well away from the flowers (extra-floral). Ants are attracted to this nectar and besides acting as a deterrent to flower eating weevils and the like, the ants are kept too busy to visit the actual flowers where they might steal pollinia.

As they are saprophytes or epiparasites dependent on root fungi associated with forest trees they have no need for leaves which might soon be eaten by wallabies and the like (the leafy tropical species avoid this problem by climbing into the trees!). Nor are they too dependent on rainfall as they are able to tap into moisture from the trees via their fungal mycorrhiza. Hence they are able to thrive and flower in the often-rainless summers of southern South Australia's Mediterranean climate even though they probably evolved in a much wetter climate.

Still they like a bit each way and have retained chlorophyll in the stem and ovaries as well as adding red or purple tints allowing them to make maximum use of the intense summer sunlight in photosynthesis. The whole plants are waxy to help prevent water loss in the frequent 40-degree temperatures and low humidity of their growing season.

How many species on Australia's southern coast? Twenty years ago it was believed that there was just one common southern Australian species (*D. punctatum* sensu lato); now we are unsure just how many taxa there might be but there are at least five pink flowered species plus the yellow green *D. hamiltonianum* in Victoria and South Australia.

For example: in the Naracoorte area of South Australia all plants were commonly identified as *Dipodium punctatum* until the 1980's when local identity Kath Alcock questioned that; she was sure there were really 2 or 3 species and wrote asking me to 'come and see'. On a memorable afternoon in January 1987 she took me to a number of sites.

"See this one with the bell shaped flowers" she explained " is always white with big dark blotches of colour." "This one with the tepals folded back is exactly the opposite" she continued, " the flowers are pink with small, pale spots; and there aren't any intermediates. Surely they are separate species!" I readily agreed.

At another site there was a third entity. "Well what about these tall white flowered plants with tiny bright spots, even the labellum is spotted on these?" I asked. " I think they are a third species," Kath replied. "That's pushing it a bit," I suggested, "but lets send some to David Jones, he has named a couple of species in New South Wales and Queensland recently!"

This was duly done and David wrote back, saying, "None of these is *Dipodium punctatum.*" The rest is history.

The species with nodding bell shaped flowers became *D. campanulatum,* the pink one with striped labellum *D. roseum* and the white one with bright spots *D. pardalinum.* To cap it all off local orchidologist Les McHugh recently found true *D. punctatum* at Naracoorte. (*D. punctatum* has small crowded spikes of pink flowers like *D. roseum* but with distinct spots.)

'What's so special about Naracoorte' you might ask 'that four species of *Dipodium* would grow in its poor sandy soils?" Interestingly the Naracoorte Range is actually an old shoreline dating back hundreds of thousands of years to a time when the area was covered with tall damp forest. The local Wonambi Fossil Centre at Naracoorte Caves tells the full story in a very exciting way, but you must go there to see for yourself.

The Species

Dipodium roseum is the most common species in Victoria and South Australia, occurring as far west as Adelaide, growing in a great variety of habitats from the seashore to mountain tops and tolerating heat and cold.

The tepals curve back and they have a pinkish background with indistinct spots. It seems to be still evolving and comes in a great colour range. There are green stemmed forms with pale flowers, green stemmed forms with deep carmine flowers, dark stemmed forms with palest flowers or dark stemmed forms with maroon flowers but they do all have stripes not spots on the narrow labellum. Some infra specific taxa may be involved, as there are forms with narrow labella, forms with broad spade like labella and some with spoon-like lips.

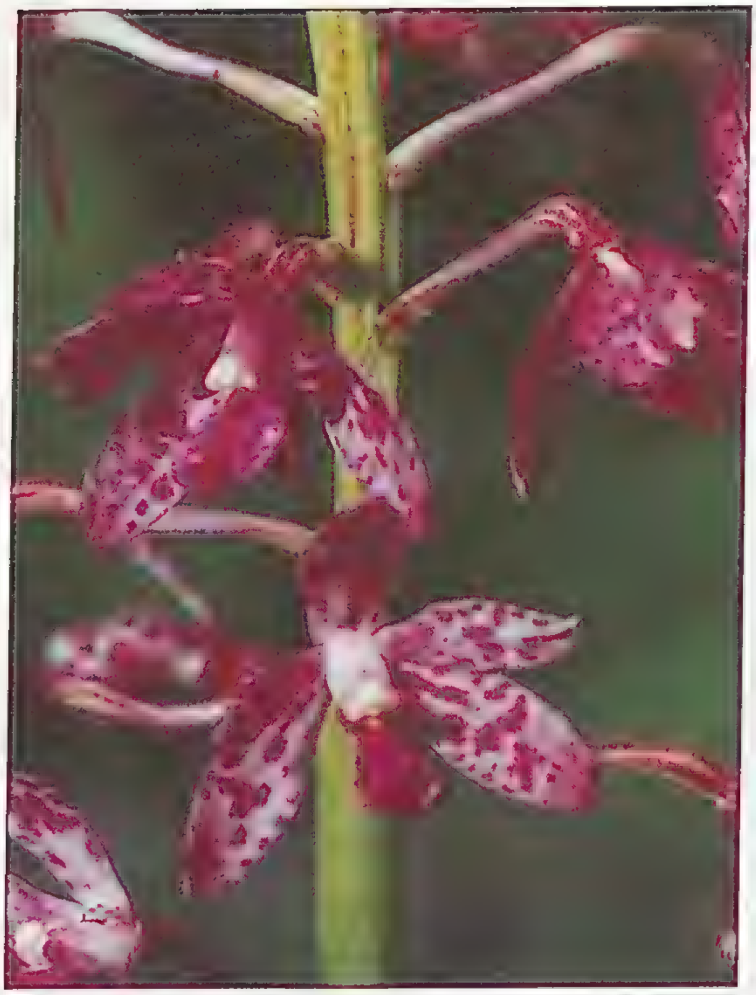
The next most common species is ***Dipodium punctatum,*** which extends from the South Australian/Victorian border right up into Queensland. It is not as free flowering as *D. roseum* nor does it form such huge colonies and it often seems to disappear in an area for years and years, at least in the southern part of its range. It has pink flowers with distinct spots; the tepals do not curl back.

The species extending furthest west is ***Dipodium pardalinum*** that has been reported from Yorke Peninsula and is certainly common in some areas south of Adelaide. How it managed to escape notice there for so long is inexplicable. (It was only found there, about 80km south of Adelaide in 1997 by Rosemary Taplin and Denzel Murfet and only 10km from Adelaide in 1998 by Cath and Mal Houston). *D. pardalinum* has slender white tepals, swept back and covered with spots, even on the labellum.

Another species with a westerly distribution is ***Dipodium campanulatum.*** This has a much smaller distribution and comes in two forms (subspecies?). The type form has clear white bell-shaped flowers and often very discrete blotches of colour. It grows on sandy rises of South Australia's southeast and Victoria's southwest. Another taxon grows on basalt soils and has muddy-white flowers with large indiscrete blotches of colour. This form is more common in Victoria. Both forms have a distinctive spoon shaped labellum.

Another species, which occurs on the south coast of Australia, is ***Dipodium variegatum.*** This has been reported as far west as the Otways but as yet the only Victorian collections have been made in the East Gippsland area in open forest. The most distinctive features of the species are the very narrow tepals, which are pale outside and dramatically blotched purple-red inside and also the unique spotted ovaries and pedicels.

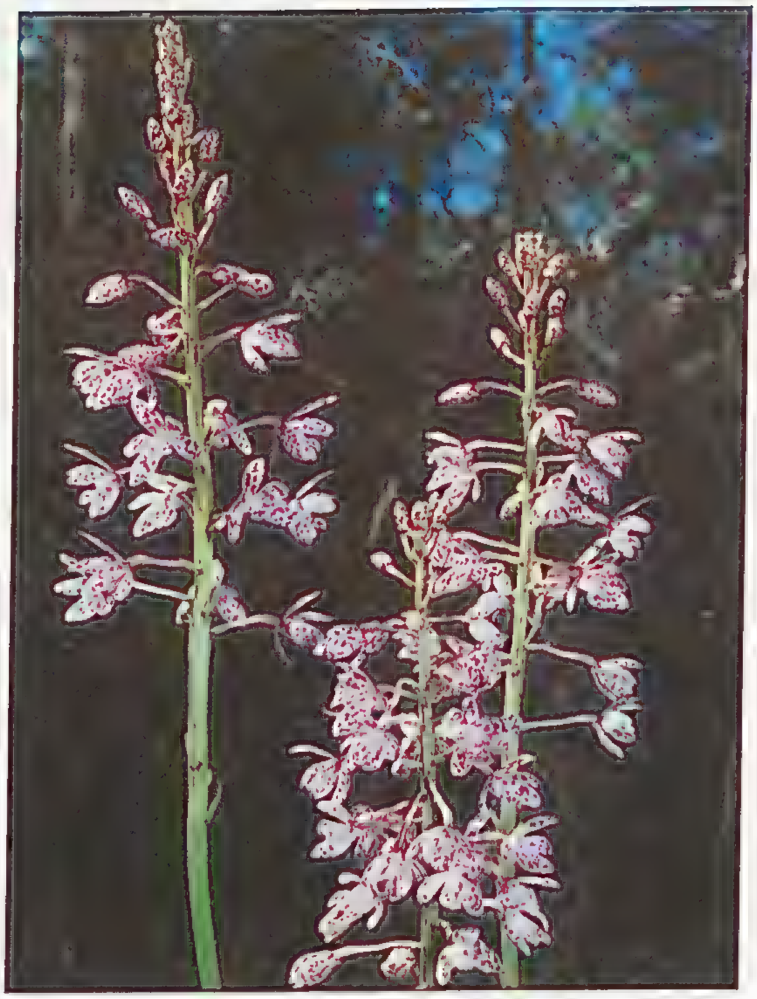
The last species is ***Dipodium hamiltonianum,*** which has been recorded at only a few sites in Victoria (Snowy River and East Gippsland) but is widespread along the western side of the Great Divide in New South Wales and Queensland. Its yellow flowers with white labellum and mauve spots are most distinctive.



T. O'Neill

Dipodium punctatum

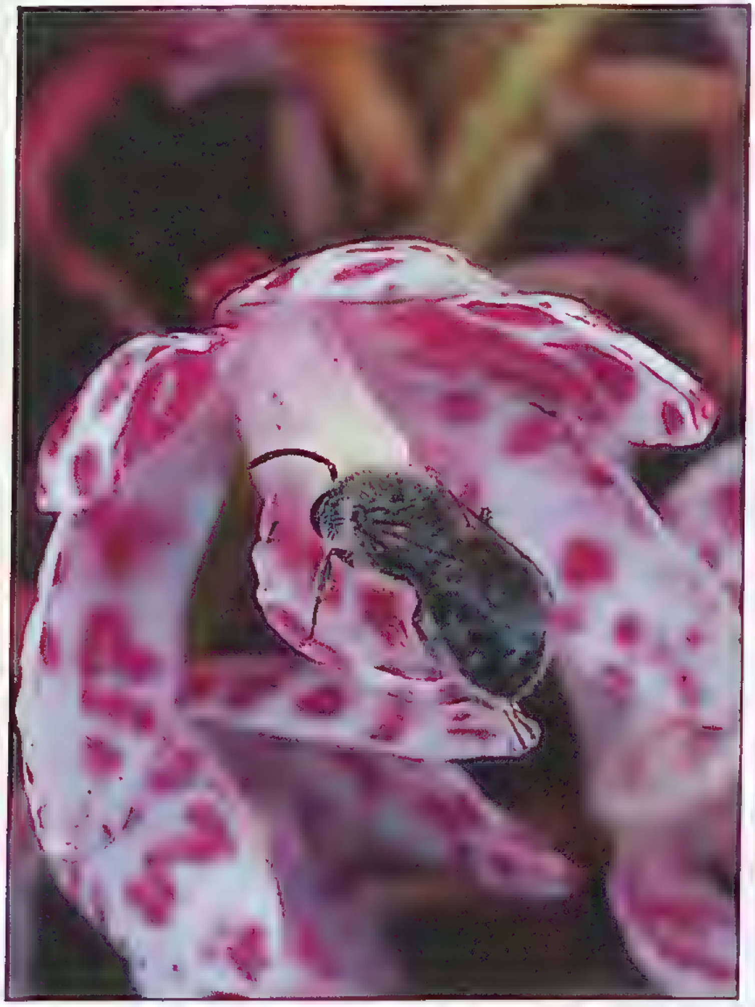
Naracoorte, South Australia



M. & K. Houston

Dipodium campanulatum

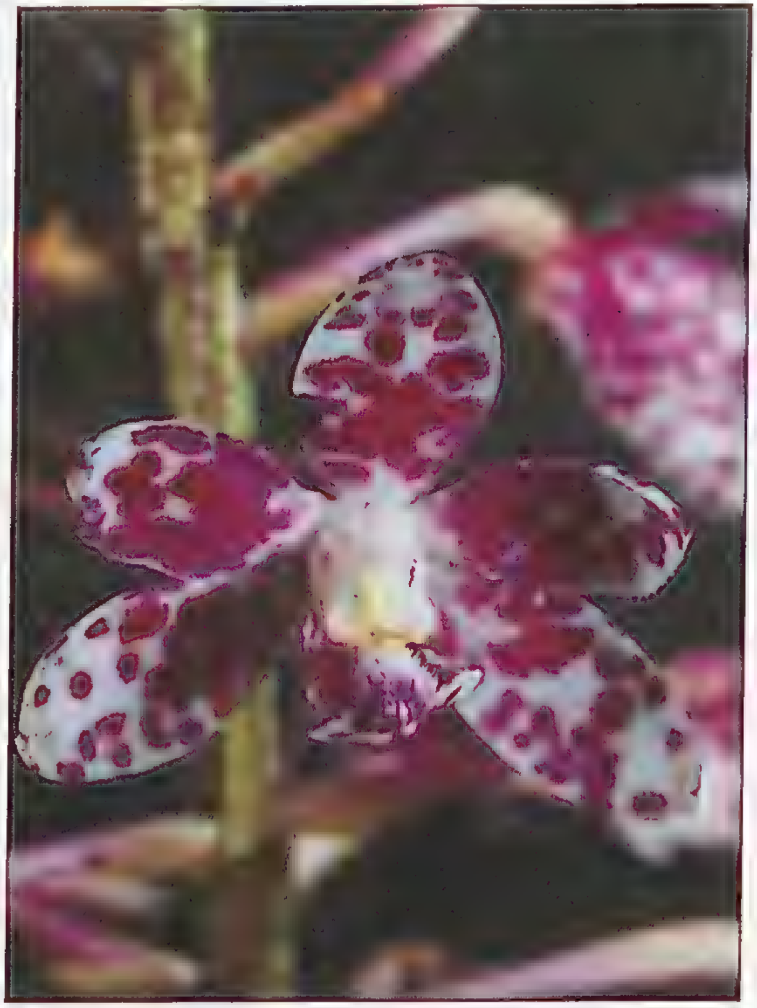
Naracoorte, South Australia



R. Bates

Dipodium campanulatum

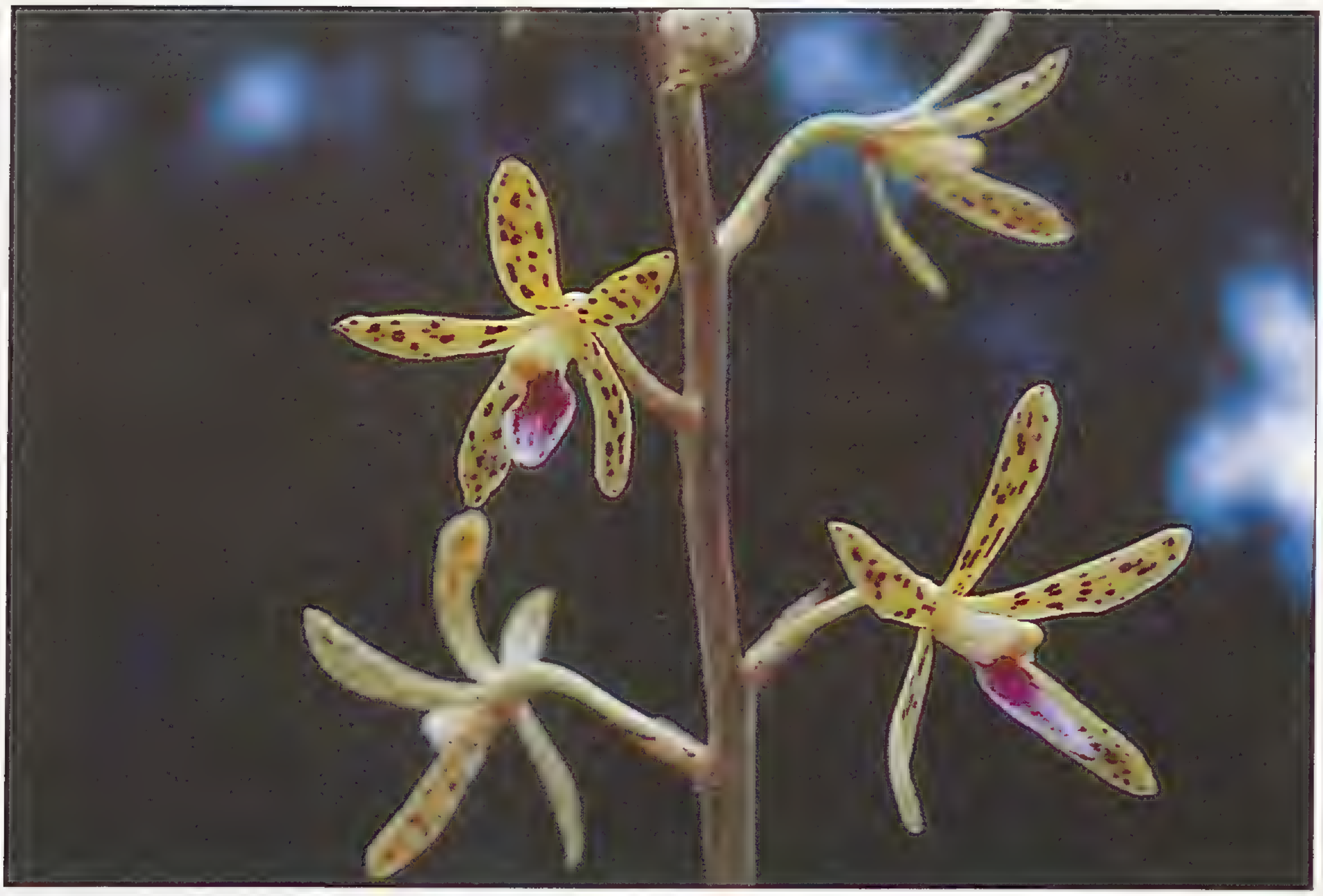
With bee pollinator - Caroline, South Aust.



M. & K. Houston

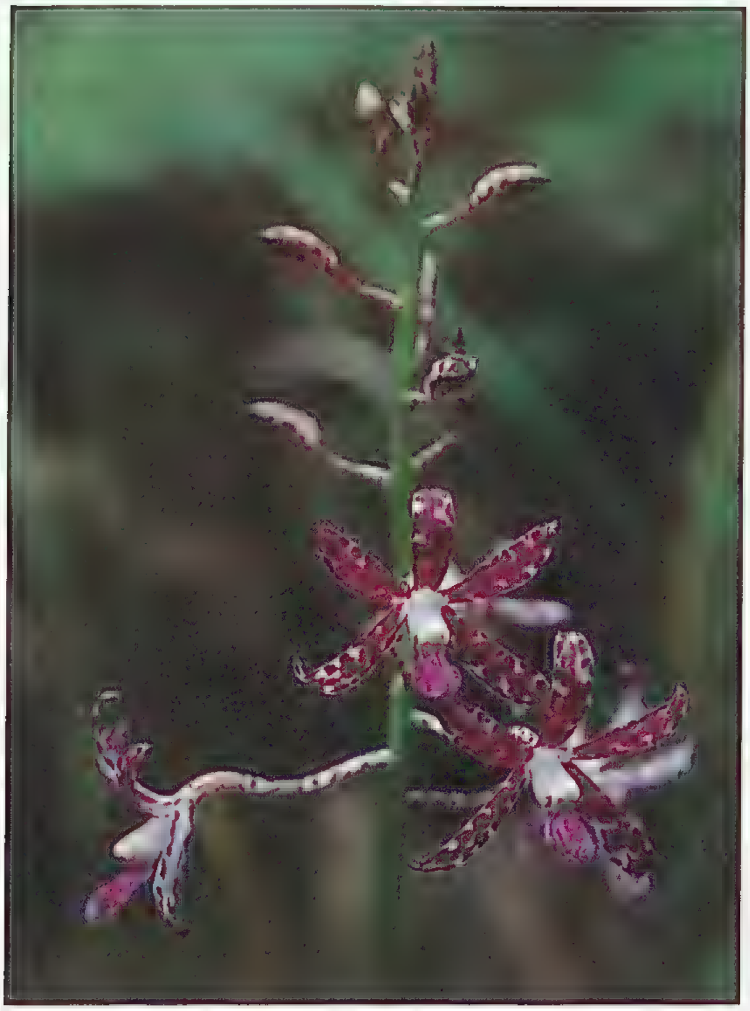
Dipodium campanulatum

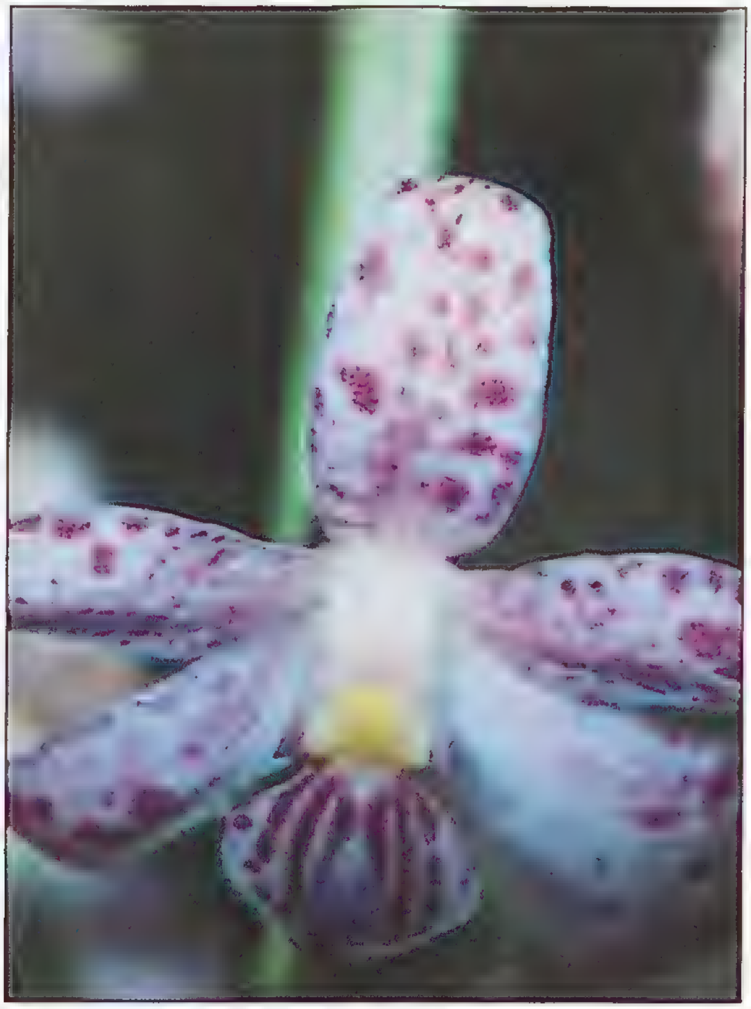
Dark form – southeast of South Australia



R. Bates

Dipodium hamiltonianum





R. Bates

Dipodium variegatum
from Grafton, N.S.W.

R. Job

Dipodium sp. aff. *pardalinum*
from near Adelaide, South Australia

There has been much recent discussion about hybrids. Plants previously reported as hybrids between *D. campanulatum* and *D. roseum* in the Naracoorte area are now treated as *D. punctatum* while a plant treated as *D. pardalinum* x *D. roseum* found by Russell Job in January 2000 at Carey Gulley near Adelaide may actually be undescribed. Considering that the pollination strategy of each species is so similar there would need to be some incompatibility between the species to prevent introgression!

Albino forms have been reported for most species (see *The Orchadian*, March 2000) and are particularly common in *D. roseum.*

It is quite possible that further rare and highly localised species will be found now that orchid enthusiasts have stopped trying to fit all southern *Dipodium* into one species! And no longer can *Dipodium* be considered an essentially tropical genus.

Dipodium in South Australia prevent native orchid enthusiasts from suffering 'summer withdrawal'. The long flowering season of this genus (December-March in South Australia) coincides with the off season for most other genera and thereby prevents the dreaded 'withdrawal' which might have occurred if no orchids were available. *Dipodium* remain interesting long after flowering as their shiny purple and green capsules hang around waiting for the cooler weather before bursting and releasing the pale seeds.

Of course the growers among us must dream of the day when some way of cultivating leafless *Dipodium* is found. Perhaps these dependent species could be grown in a pot of bonsai gum trees. These would provide a host for the orchids and would solve the problem of how to make the pots attractive when the *Dipodium* are not in flower. It may look weird to have orchids taller than the trees!

I am grateful to Kathy and Mal Houston, to Jeff Jeanes, Russell Job and Thelma O'Neill for photographs and advice on locations, to Kath Alcock for introducing me to the mysteries of *Dipodium*, to Les McHugh for material of *D. punctatum* in South Australia and to my wife Kerry for accompanying me on 'expeditions'.

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Fourth Australasian Native Orchid Conference and Show An Event to Remember

Tony Slater, ANOS Victoria
Email: Tony.Slater@nre.vic.gov.au

Over 5-8th October 2000, the Fourth Australasian Native Orchid Conference and Show was held in Melbourne. Now that it is over, the organising committee from within ANOS Vic group has a quiet sense of relief that it was worth all the hard work. Perhaps, like the Olympics, all those who attended the Conference and Show have taken away with them many wonderful memories of a great event, memories that they will share with others.

The Conference and associated activities had over 150 delegates, while over 1,600 people attended the show. The focal point of the Show was the main display, which was an embodiment of the chosen theme "Native Orchids – Our Natural Heritage". The concept was a pathway through seven natural habitats with their orchids – Grassland, Open Woodland, Heathland, Closed Forest, Casuarina Forest, a Rocky Escarpment and Subtropical Rainforest.

To translate the concept of the habitat display from ideas to reality meant hard work: planning, drawing, and constantly reviewing the vision so that it would be both attractive and informative. Grasses and shrubs were sourced and repotted, large trees and palms located, a rock face designed and constructed. Creating the supporting framework and hiding the props was an extra challenge. Finding the orchids to include in the display was the easy part. With the smell of the eucalypts and plants, and the sounds of birds it was easy to imagine that one was in the bush rather than in the building. What started off as an ambitious project, as it progressed, fired the imagination of the group and was a highlight of the Conference and Show. Accompanying the habitat display were information boards that described and illustrated the habitat so that the audience could appreciate each scene fully. This information and the illustrations were also presented in an attractive booklet for people to take away as a souvenir. Copies of the booklet are available from ANOS Vic group.

The Cocktail Party was held in the Show area, and the vibrant colour of the orchids, magnificent displays and the perfume provided a sensory delight. With the ceremonial cutting of the ribbon delegates were able to stroll through the habitat display for the first time.

The Conference itself provided something for everyone. Over twenty papers were presented on a wide variety of interesting topics: - Conservation to Cultivation, Terrestrials to Taxonomy, Epiphyte species and hybrids. The papers on conservation topics gave us some hope for the future, but also indicated that there is much to be done to prevent the loss of habitat and orchids. David Jones put into words what was probably the general feeling of appreciation at the number of young people who are now involved in research and conservation of native orchids. The Proceedings from the Conference contain full copies of the papers presented at the Conference, and copies are available from ANOS Inc and ANOS Vic group.

The orchid show could only be described as magnificent. Displays at the Show came from various clubs throughout Victoria, as well as from Sydney and Adelaide. There were many beautifully grown and presented plants but the judges had little trouble deciding on Peter Adams' *Dendrobium speciosum* 'Lemon Ice' as the Grand Champion of the Show. This plant was also nominated for the Bill Murdoch Trophy. Les Nesbitt's *Pterostylis* Cutie 'Harold's Pride', was judged the Champion Specimen Terrestrial Orchid of the Show and also nominated for the Ira Butler Trophy.

The associated Art & Craft display with its range of exhibits drew much interest from visitors to the show. The Photographic Competition was very popular and there were an impressive number of quality entries.

There were three field trips associated with the Conference and all were well attended. The three-day trip to the Grampians was blessed with wonderful weather to look at orchids in this floristically rich part of the State. The trip to Anglesea attended by 23 delegates was assured of a great day with Everett Foster and Margaret MacDonald leading. Forty orchids were seen with 30 of these in flower. A near perfect sunny day was ideal for *Thelymitra* to be at their best. *Thelymitra aristata* and clumps of *Thelymitra flexuosa* would be one of the day's highlights. Eleven species and hybrids of *Caladenia* were seen during the day. The last field trip on the Sunday went to areas to the North East of Melbourne. Probably the highlight of the day could be considered the ten or so flowering plants of *Caleana major* that were seen.

The Conference Dinner was definitely a success with over 90 people enjoying the opportunity to socialise. It was an excellent venue to enjoy fine food and wine, and the company of old and new friends. During the evening the major Show awards were presented, then a closely guarded secret was announced. Murray Corrigan, the Chairman of the Ira Butler Trophy Committee announced the inauguration of a new award – the R.D. FitzGerald trophy for outstanding service to the advancement, propagation and conservation of Australian native orchid species. All present were delighted when the initial award was made to Helen Richards of the ANOS Victoria group. Helen was simply bereft of words for a few minutes.

The Fifth Australasian Native Orchid Conference and Show will be hosted by ANOS Macarthur group. They are already in planning mode so that it is sure to be a great event. The success of such a conference and show depends not only on the hard work of the host group but the support of all ANOS groups. We wish them well.

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4th ANOS Conference Show, Melbourne – October 2000

Yarra Valley Orchid Society display

John & Heather Evans' display

Helen Richards and Murray Corrigan

(4) A requisition of members for a Special General Meeting:-
  (a) shall state the purpose or purposes of the meeting; and
  (b) shall be signed and dated by all members making the requisition; and
  (c) shall be lodged with the Secretary; and
  (d) may consist of several documents of similar form, each signed and dated by one or more of the members making the requisition.

(5) If Council fails to convene a Special General Meeting to be held within 60 days after the date on which a requisition of members for the meeting is lodged with the Secretary, any one or more of the members who made the requisition may convene a Special General Meeting to be held not later than 90 days after the date of the requisition.

(6) A special General Meeting convened by a member or members in accordance with Rule 14(4) shall be convened as nearly as is practicable in the same manner as other meetings of the Society under these Rules.

19. CONDUCT OF MEETINGS OF THE SOCIETY

(1) At any meeting of the Society the President, or in his absence, the Vice-President, shall preside. If the President and the Vice-President are absent or unwilling to act, the members present shall elect a member to preside at the meeting.

(2) Any 20 members of the Society constitute a quorum for the transaction of business at any meeting of the Society.

(3) If a quorum is not present, no official business may be transacted.

(4) Upon any question arising at a meeting of the Society a member has one vote only except that, in the case of an equality of votes on a question, the person presiding at the meeting may exercise a second or casting vote.

(5) All votes at a meeting of the Society shall be given personally or by proxy but no member may hold more than five proxies. The notice appointing the proxy shall be in the form set out in Appendix One to these Rules.

20. INSURANCE

(1) The Society shall effect and maintain insurance pursuant to S.44 of the Act.

(2) In addition to the insurance required under Rule 20(1), the Society may effect and maintain other insurance.

21. FUNDS – SOURCE

(1) The funds of the Society shall be derived from entrance fees, annual membership fees of members, donations and, subject to any resolution passed by the Society in any meeting, such other sources as Council determines.

(2) All money received by the Society shall be deposited as soon as practicable and without deduction to the credit of the Society's bank account.

(3) The Society shall, as soon as practicable after receiving any money, issue a receipt if so requested.

22. FUNDS – MANAGEMENT

(1) Subject to any resolution passed by the Society at any meeting, the funds of the Society shall be used in the pursuance of the Objectives of the Society in such manner as Council determines.

(2) All cheques, drafts, bills of exchange, promissory notes and other negotiable instruments shall be signed by any two members of Council authorised to do so by Council.

(3) All expenses of Council and members reasonably incurred on behalf of the Society expressly authorised by Council shall be paid out of the funds of the Society.

23. ALTERATION OF OBJECTIVES AND RULES

(1) The statement of Objectives and Rules may be altered, rescinded or added to only by a special resolution of the Society at a meeting of the Society of which at least 21 days written notice specifying the proposed special resolution has been given to members.

(2) A special resolution is passed if it is passed by a majority which comprises not less than three-quarters of members who vote in person or by proxy at a meeting of the Society held in accordance with Rule 23(1).

24. COMMON SEAL

(1) The Common Seal of the Society shall be kept in the custody of the Secretary.

(2) The Common Seal shall not be affixed to any instrument except by the authority of Council and the affixing of the Common Seal shall be attested by the signatures of any two Office-Bearers.

25. CUSTODY OF BOOKS, ETC.

Except as otherwise provided by these Rules, the Secretary shall keep custody or control of all records, books and other documents relating to the Society.

26. INSPECTION OF BOOKS, ETC.

The records, books and other documents of the Society shall be open to inspection, free of charge, by any member of the Society at any reasonable hour.

27. SERVING OF NOTICES

(1) For the purposes of these Rules, a notice may be served by or on behalf of the Society upon any member either personally or by post to the member's address shown in the register of members.

(2) Where a document is sent to a person by properly addressing, prepaying and posting to a person a letter containing the document, the document shall, unless the contrary be proved, be deemed for the purpose of these Rules to have been served on the person at the time at which the letter would have been delivered in the ordinary course of post.

28. DISSOLUTION OF THE SOCIETY

If upon the winding up or dissolution of the Society, there remains after satisfaction of all its debts and liabilities any property whatsoever, the same shall not be paid to or distributed among the members of the Society but shall be given or transferred to an institution having objectives similar to the Society.

29. BY-LAWS

(1) Subject to the Act, Regulations and these Rules, Council may make, repeal or amend By-Laws for the better conduct and efficiency of the Society.

(2) By-Laws shall have effect until repealed or amended by Council or a meeting of the Society.

30. ADVISORY COMMITTEE

(1) The Society shall establish an Advisory Committee comprising Council and one delegate of each regional Australasian Native Orchid Society Group and Affiliated Native Orchid Society.

BY-LAWS

(As Amended 7th June, 1994)

1. CLASSES OF MEMBERS

(a) Life Members as defined in Rule 4(3)(b)

(b) Patron as defined in Rule 4(3)(c)

(c) Ordinary as defined in Rule 4(1)

(d) Group Members shall be financial members of an Australasian Native Orchid Society Inc. Group, non-subscribers to *The Orchadian*, paying an annual fee to the Australasian Native Orchid Society Inc. as fixed from time to time by Council. This annual fee to be paid by the group to the Australasian Native Orchid Society Inc.

(e) Family Members being of the immediate family of an Ordinary or Life Member, living at the same address, a non-subscriber to *The Orchadian*, paying an annual fee to the Australasian Native Orchid Society Inc. as fixed from time to time by the Australasian Native Orchid Society Inc. Council.

APPENDIX 1

PROXY FORM

I, ...

of ....

being a financial member of THE AUSTRALASIAN NATIVE ORCHID SOCIETY INC. hereby appoint

(1)...................................... of ....

or, failing him/her

(2)...................................... of ....

or THE PRESIDENT as my proxy to vote and otherwise act on my behalf at the extraordinary/annual

meeting of members to be held on .... and at any adjournment thereof.

Signed this .... day of .... 20 ....

....

Member's signature

The Australasian Native Orchid Society Inc.

RULES

(As Amended 5th August, 2000)

1. NAME

The society shall be called The Australasian Native Orchid Society Inc., hereinafter called "the Society".

2. INTERPRETATION

In these rules, except in so far as the context or subject matter otherwise indicates or requires:-

"Council" means the committee of management of the Society.

"Councillor" means a member of Council who is not an Office-Bearer of the Society.

"Secretary" means the person holding office under these rules as Secretary of the Society.

"Special General Meeting" means a general meeting of the Society, other than an Annual General Meeting.

"Australasia" means the Commonwealth of Australia and all its Territories at the date of these Rules, together with New Zealand, New Caledonia, Vanuatu, Fiji, Papua New Guinea including the Bismark Archipelago, Solomon Islands, West Irian, all islands south-east of a line joining 0° Latitude 130° East Longitude and 20° South Latitude and 120° East Longitude and all islands East of Australia to the International Date Line and South of the Equator.

"Native Orchid" means an orchid species native to Australasia.

"Native Orchid Hybrid" means an orchid, the parents of which are exclusively native orchid species or hybrids derived therefrom.

"The Act" mean the Association Incorporation Act 1984, as amended.

"The Regulations" means Regulations made under the Act.

3. OBJECTIVES

The objectives of the Society shall be:-

(1) to promote the culture and propagation of native orchids and native orchid hybrids; and

(2) to promote the preservation of native orchids and native orchid hybrids in their natural habitat; and

(3) to promote the scientific and cultural knowledge of native orchids and native orchid hybrids; and

(4) to print and publish pamphlets and periodicals that the Society may consider desirable for the promotion and furtherance of any of its objectives; and

(5) to establish and maintain standards for the judging of native orchids and native orchid hybrids and to train judges to apply these standards; and

(6) to establish and maintain awards for native orchids and native orchid hybrids; and

(7) to invest and deal with the funds and property of the Society in such a manner as may from time to time be thought fit; and

(8) to negotiate and conclude arrangements for affiliation with organisations with similar objectives to those of the Society.

(9) to engage in any activity relevant to these objectives.

4. MEMBERSHIP

(1) **Qualifications**

A person is qualified as a member of the Society if:-

  (a) the person was a member of the Australasian Native Orchid Society (without the word "Inc.") immediately prior to the incorporation of the Society; or
  (b) the person is a natural person who:
    (i) has been nominated for membership of the Society by Rule 4(2)(b); and
    (ii) has been approved for membership of the Society by Council.

(2) **Nomination for Membership**

  (a) A nomination of a person for membership of the Society shall be made in writing on the form approved from time to time by Council and shall be lodged with the Secretary.
  (b) As soon as practicable after receiving a nomination for membership the Secretary shall refer the nomination to Council which shall determine whether to approve or reject the nomination.
  (c) Where Council determines to approve the nomination for membership, the Secretary shall, as soon as possible after the determination, notify the nominee of that approval and request that the nominee pay, if the nominee has not already done so, the sums payable under these Rules by a member as entrance fee (if any) and annual subscription within 28 days of the date of the notification.
  (d) The Secretary shall, on approval of the nomination and payment by the nominee of the amount(s) referred to in Rule 4(2)(c), enter the nominee's name in the register of Members and, upon the name being so entered, the nominee becomes a member of the Society.

(3) Classes of Members

  (a) Council may from time to time as it sees fit, provide for different classes of members and membership including, but not limited to, Patron, Life, Ordinary and Junior members.
  (b) Council may recommend to an Annual General Meeting that a member, whose conduct and service to the Society has been of outstanding value, be elected a life members. Life Membership will carry all the rights and obligations of ordinary membership except the payment of annual membership fees.
  (c) Council may appoint one or more Patrons, being a person who by their position in the community, shall add prestige to the Society.

(4) **Cessation of Membership**

A person ceases to be a member of the Society if the person:
- (a) resigns that membership; or
- (b) is expelled from the Society; or
- (c) fails to pay the annual membership fee referred to in Rule 5(2); or
- (d) dies.

(5) **Membership Entitlements not Transferable**

A right, privilege or obligation which a person has by reason of membership of the Society:
- (a) is not capable of being transferred or transmitted to another person; and
- (b) terminates upon cessation of the person's membership

(6) **Resignation of Membership**
- (a) A member of the Society is not entitled to resign that membership except in accordance with this Rule.
- (b) A member of the Society may resign from membership of the Society by first giving notice in writing to the Secretary of the member's intention to resign and, upon receipt of the notice by the Secretary, the member ceases to be a member.

(7) **Register of Members**
- (a) The Secretary shall establish and maintain a register of members of the Society specifying the name and address of each member together with the date on which the person became a member.
- (b) The register of members shall be kept at the principal place of administration of the Society and shall be open for inspection, free of charge, by any member of the Society at any reasonable hour.

5. FEES, SUBSCRIPTIONS, ETC.

(1) A member of the Society shall, upon admission to membership, pay to the Society any entrance fee determined from time to time by Council.

(2) In addition to any amount payable by a member under Rule 5(1) a member of the Society, excepting Patron and Life Members, shall pay to the Society an annual membership fee determined by Council:-
- (a) before 1 July in each calendar year; or
- (b) where the member becomes a member on or after 1 July in any calendar year, upon becoming a member and before 1 July in each succeeding calendar year.

6. MEMBERS LIABILITIES

The liability of a member of the Society to contribute towards the payment of debts and liabilities of the Society or the costs, charges and expenses of the winding up of the Society is limited to the amount, if any, unpaid by the member in respect of membership of the Society as required by Rule 5.

7. DISCIPLINING OF MEMBERS

(1) Where Council is of the opinion that a member of the Society:-
- (a) has persistently refused or neglected to comply with a provision of these Rules; or
- (b) has persistently and wilfully acted in a manner prejudicial to the interests of the Society, Council may by resolution:
  - (i) expel the member from the Society; or
  - (ii) suspend the member from membership of the Society for a specified period.

(2) A resolution of Council under Rule 7(1) is of no effect unless Council, at a meeting held not earlier than 14 days and not later than 28 days after service on the member of a notice under Rule 7(3) confirms the resolution in accordance with this Rule.

(3) Where Council passes a resolution under Rule 7(1), the Secretary shall as soon as practicable, cause a notice in writing to be served on the member:
- (a) setting out the resolution of Council and the grounds on which it is based; and
- (b) stating that the member may address Council at a meeting to be held not earlier than 14 days and not later than 28 days after service of the notice; and
- (c) informing the member that the member may do either or both of the following:
  - (i) attend and speak at the meeting
  - (ii) submit to Council at or prior to that meeting written representations relating to the resolution.

(4) At a meeting of Council held in accordance with Rule 7(3) Council shall:
- (a) give the member an opportunity to make oral representations; and
- (b) give due consideration to any written representations submitted to Council by the member at or prior to the meeting; and
- (c) by secret ballot determine whether to confirm or revoke the resolution.

(5) Where Council confirms a resolution under Rule 7(3), the Secretary shall, within seven days after the confirmation, by notice in writing inform the member of the fact and of the member's right of appeal under Rule 8.

(6) A resolution confirmed by Council under Rule 7(4) does not take effect:
- (a) until the expiration of the period within which the member is entitled to appeal against the resolution where the member does not exercise the right of appeal within that period; or
- (b) where within that period the member exercises the right of appeal, unless and until the Society confirms the resolution pursuant to Rule 8(4).

8. RIGHT OF APPEAL OF A DISCIPLINED MEMBER

(1) A member may appeal to the Society in a general meeting against a resolution of Council which is confirmed under Rule 7(4) by lodging with the Secretary within seven days after notice of the resolution is served on the member, a notice to that effect setting out the grounds of the appeal.

(2) Upon receipt of a notice from a member under Rule 8(1) the Secretary shall notify Council which shall convene a general meeting of the Society to be held within 28 days after the date on which the Secretary received the notice.

(3) At a general meeting of the Society convened under Rule 8(2);
- (a) no business other than the question of the appeal shall be transacted; and
- (b) Council and the member shall be given the opportunity to state their respective cases orally or in writing, or both; and
- (c) the members present shall vote by secret ballot on the question of whether the resolution should be confirmed or revoked.

(4) If at the General Meeting the Society passes a special resolution in favour of the confirmation of the resolution of the resolution, the resolution is confirmed.

9. COUNCIL

(1) **Powers of Council**

Council, subject to the Act, the Regulations and these Rules and to any resolution of the Society passed in general meeting:-
- (a) shall control and manage the affairs of the Society; and
- (b) may exercise all such other functions that are required by these Rules to be exercised by a general meeting of the members of the Society; and
- (c) has the power to perform all such acts and do all such things as appear to Council to be necessary or desirable for the proper management of the affairs of the Society.

(2) **Membership of Council**
- (a) Council shall consist of:-
  - (i) the Office-Bearers of the Society; and
  - (ii) seven Councillors, each of whom shall be elected at the Annual General Meeting of the Society pursuant to Rule 9(3); and
  - (iii) the Immediate Past President of the Society, so long as he or she remains a member, shall remain a member of Council without holding any office during the succeeding President's term of office.
  - (iv) the Society's New South Wales Registrar of Judges, duly elected by the New South Wales Judging Panel set up pursuant to Rule 3(5); and
  - (v) the Society's National Registrar of Judges, duly elected by the A.N.O.S. Inc. Judging Panels set up pursuant to Rule 3(5).
- (b) The Office-Bearers of the Society shall be:-
  - (i) the President;
  - (ii) the Vice-President;
  - (iii) the Treasurer;
  - (iv) the Secretary;
  - (v) the Editor;
  - (vi) the Conservation Officer.
- (c) Each member of Council may, subject to these Rules, hold office until the conclusion of the Annual General Meeting following the date of the member's election, but is eligible for re-election except that the President's term shall not exceed three consecutive years.
- (d) In the event of a casual vacancy occurring in the membership of Council, Council may appoint a member of the Society to fill the vacancy and the member so appointed shall hold office, subject to these Rules, until the conclusion of the Annual General Meeting next following the date of appointment.

(3) **Election of Members of Council**
- (a) Nominations of candidates for election as Office-Bearers of Councillors on Council shall:-
  - (i) be made in writing, signed by a member of the Society and accompanied by the written consent of the candidate; and
  - (ii) be delivered to the Secretary not less than seven days before the date fixed for the holding of the Annual General Meeting at which the election is to take place.
- (b) If insufficient nominations are received to fill all vacancies on Council, the candidates nominated shall be deemed to be elected and further nominations shall be received at the Annual General Meeting.
- (c) If insufficient further nominations are received, any vacant positions remaining on Council shall be deemed to be casual vacancies.
- (d) If the number of nominations received is equal to the number of vacancies, the persons nominated shall be deemed to be elected.
- (e) If the number of nominations received exceeds the number of vacancies to be filled, a secret ballot shall be held.
- (f) Any ballot for the election of Office-Bearers and Councillors shall be conducted at the Annual General Meeting in such usual and proper manner as Council may direct.

(4) **Delegation by Council to Sub-Committee**

Council may refer any matter or thing to a Sub-Committee for report or action and for that purpose may delegate any powers deemed necessary and not inconsistent with these Rules.

10. SECRETARY

(1) It is the duty of the Secretary to keep minutes of:-
- (a) all appointments of Office-Bearers and Councillors;
- (b) all proceedings at Council meetings and general meetings and to present such minutes for signing by the Chairperson of the next succeeding meeting.

(2) The Secretary, unless Council otherwise directs, shall be the Public Officer of the Society and the Public Officer's private residence shall be the principal place of administration of the Society.

(3) The Secretary shall conduct the correspondence of the Society and shall keep in custody, or under personal control, all documents of the Society, other than those required by the Treasurer.

11. TREASURER

(1) It is the duty of the Treasurer to ensure that:-
- (a) all moneys due to the Society are collected and received and all payments authorised by Council or the Society are made; and
- (b) correct books and accounts are kept showing the financial affairs of the Society, including full details of all receipts and expenditures connected with the activities of the Society.

12. CASUAL VACANCIES

(1) For the purpose of these Rules, a casual vacancy in Council occurs if the member:-
- (a) ceases to be a member of the Society; or
- (b) becomes an insolvent under administration within the meaning of the Companies (New South Wales) Code; or
- (c) resigns office by notice in writing given to the Secretary; or
- (d) is removed from office under Rule 13; or
- (e) becomes of unsound mind or a person whose person or estate is liable to be dealt with in any way under the law relating to mental health; or
- (f) is absent without the consent of Council for three consecutive meetings of Council.

13. REMOVAL OF A MEMBER FROM COUNCIL

The Society in a general meeting may by resolution remove any member from Council before the expiration of the member's term in office, provided always that the member shall be duly notified of the proposed resolution and is afforded a fair and reasonable opportunity of making representations and being heard at such general meeting.

14. MEETINGS OF AND QUORUM FOR COUNCIL

(1) Council shall meet at least every two months at such a time, date and place as Council may determine provided that the President or Council may cancel or defer any such meeting for sufficient cause.

(2) Oral or written notice of meetings of Council shall be given by the Secretary to each member of Council at least 48 hours (or such other period as may be unanimously agreed upon by the members of Council) before the time appointed for the holding of the meeting.

(3) A quorum for a meeting of Council shall comprise a number equal to the next whole number above 50 percent of Council for the time being.

(4) If a quorum is not present, no official business may be transacted and the Council meeting shall be deferred to a later date.

(5) At any meeting of Council:-
- (a) the President, or in the President's absence, the Vice-President, shall preside; or
- (b) if the President and the Vice-President are absent or unwilling to act, such one of the remaining members of Council as may be chosen by the members present at the meeting may preside.

(6) Any person may, at the discretion of the President, attend meetings of Council but that person may only be heard with the permission of Council.

15. VOTING AND DECISIONS AT COUNCIL MEETINGS

(1) Questions arising at a meeting of Council shall be determined by a majority of votes of the members of Council present at that meeting.

(2) Each member present at a meeting of Council (including the person presiding at the meeting) is entitled to one vote on each question but, in the event of an equality of votes on any question, the person presiding may exercise a second or casting vote.

16. ANNUAL GENERAL MEETING - HOLDING OF

The Society shall, at least once in each calendar year and within the period of six months after the expiration of each financial year of the Society, convene an Annual General Meeting of its members.

17. ANNUAL GENERAL MEETING – CALLING OF AND BUSINESS AT

(1) The Annual General Meeting of the Society shall, subject to the Act and Rule 16, be convened on such time, date and place as Council thinks fit.

(2) Any notice of an Annual General Meeting shall be sent to members at least 21 days prior to the date of the Annual General Meeting.

(3) In addition to any other business which may be transacted at an Annual General Meeting, the business of the Annual General Meeting shall be:-
- (a) to confirm the minutes of the preceding Annual General Meeting and of any Special General Meeting held since that meeting; and
- (b) to receive from Council, reports upon the activities of the Society during the preceding financial year; and
- (c) to elect Office-Bearers and Councillors; and
- (d) to receive and consider the statement which is required to be submitted to members pursuant to S.26(6) of the Act.

(4) An Annual General Meeting shall be specified as such in the notice convening it.

18. SPECIAL GENERAL MEETINGS – CALLING OF

(1) Council may, whenever it thinks fit, call a Special General Meeting of the Society by issuing a notice to members specifying the time, date, place and nature of the business of the meeting.

(2) Any notice of a Special General Meeting shall be sent to members at least 21 days prior to the date of the Special General Meeting.

(3) Council shall, on the requisition in writing of not less than 5 per cent of the total number of members, convene a Special General Meeting.

A Bit About Watering Those Orchids

Gerry Walsh
46A Fourth Ave., Llandilo NSW 2747

Of all the cultural facets that orchid growers must come to grips with in the pursuit of their life-long devotion, the simple act of watering them is perhaps the most difficult one to quantify in good old 'plain English'. In nearly every other department of horticulture, we are given very specific instructions on what to do for this or how to handle that.

To explain what I'm on about, the following example would seem the best way to start the discussion rolling. Let us assume for a moment that you're sitting on a rock in the middle of the desert, just hanging around ... doing nothing, when a UFO suddenly lands in front of you. Out steps Urqvug, an entity with a face only his mum could love. He announces that you are the chosen one and proceeds to present you with a plant that will rid the Earth of all disease and at least half of all St George rugby league supporters.

What a boom this wonderful plant is, you smirk to yourself – "I'll make a mint!" Within a few seconds, Urqvug has returned to his ship and zoomed off. All that is left is a simple set of instructions, mysteriously written in English, that spells out how to nurture this incredible shrub, that will relieve mankind of all his medical afflictions – plus get even for the humiliation of the 1977 grand final replay.

In short, the Medivac Dragon plant (as you have promptly baptised it) is best grown in an open mix of three parts coarse river sand and one part German peat moss, into which you must mix five grams each of iron chelates and Magnesium sulphate. Place this in an eight inch pot (terracotta for preference) and fertilise with 50 grams of six month Osmocote twice a year, Spring and Autumn. If fungus spots appear, treat with "Fungerbunger®" at the rate of one ml/litre. Grow in warm position under 50% shade cloth. Tip prune at the end of winter each year.

Now, what could be simpler you think? But right at the end of Urqvug's instructions you come to the loose cannon. "Water As Required" it says. What the hell does that mean? How many mils? How many litres? How often? Less in winter? More in summer? Morning or night? The panic sets in ...

And so it is in your bush house. Everything is defined for you in very exacting terms. That is until you come to the watering. Then it's Rafferty's Rules. Watering is a greatly imprecise science that can be neither accurately taught nor confidently interpreted.

Prevailing environmental factors play a huge role in how much water an orchid needs, or rather, how much water the grower needs to give it. Using my own bushhouse as an example, it sits in the middle of about 15 acres of surrounding land that has not a windbreak or building of any kind for at least 70 metres. When the winds are up they rip across from the south to the northwest without obstruction and dry the whole bushhouse out quite quickly.

Where I used to live I had the luxury of protection by paling fences and brick houses all around and at close proximity. I did not need to water with anything like the regularity that I need to now. It took a while to adapt my watering to suit the new conditions. There was no formula or set of tables that could help me. There is no startling revelation in this statement. We must each learn to adapt to our allotted conditions.

One of the greatest problems I've encountered is explaining to new chum growers how they should treat a species that they have just acquired and have no experience of. The most frequent question is usually "How often do I water it?" The answer is always given with mixed feelings and complicated explanations on what constitutes normalcy.

The real problem is this: what one grower calls heavy watering is exactly what the next grower would think of as light watering. I experience this myself often. I've been in bushhouses where the owners should have been reported for cruelty to their plants – such was the infrequency of their watering. Yet the plants themselves seem happy enough. Perhaps it is me that has the misunderstanding.

One of the best native orchid growers around the village is Eric Lielkajis. Eric has given me a few nice plants over the years. He grows them in what I would call very wet conditions. There is lots of bright green moss on most of Eric's mounted plants. Within a few weeks of being sentenced to life under my brutal conditions, a good number of those unfortunate plants have tossed it in. There really isn't any way I could hope to emulate Eric's conditions, even by throwing truckloads of money at my bush house.

The shock of being transferred from the Lielkajis Hilton to Stalag Walsh has proven too much for many of these plants. And yet others I have obtained from bushhouses where the conditions were never as soft as Eric's have fared much better. But wet certainly works for Eric, and works well.

The problem, I admit, is all in my head, and what I call insufficient watering under my conditions, has proved successful enough for growers with less harsh locations. I guess a Calamari Bushman, (I think that should be Kalahari actually), and a New Guinea Highlander would have differing ideas on how much water 'normal' actually represents.

Other aspects of culture come into the water equation as well. The potting mix is a very important one. So too are the mounts you use. A piece of tree fern obviously holds more water then a fence paling. And if you're using sphagnum moss or epiphytic moss your plants won't be drying out as fast as they would without it.

Another problem is delineating between heavy watering and frequent watering. If you happen to be an astronaut, you may be away from home for five or six days at a time. You must water when you can and that means you'll probably water heavy. This is preferable to letting your missus run riot with the hose – dragging it over half your pots and missing wetting the other half anyway.

In my own case, I tend to water frequently but not as heavy as I would like. It takes me about 50 minutes to deliver a light watering in the bushhouse. In summer, this means a daily drudgery that I grow weary of quickly. I resent the amount of time I need to find and by summers' end I have inevitably developed a hatred of the job and wish I could give all the orchids away. The amount of water I give is 'watered down' dramatically and I rush through them swearing and muttering as I go. To give what I call a heavy watering takes around an hour and a half. If I fertilise, this extends to two hours. The daily quick fix is the lesser of the two evils I've decided.

A compromise I mostly stick to is to just water the mounted plants every day and add on the potted plants every second day. If the weather is not up in the high 30s°C or the occasional thunderstorm has dumped some relief over all, then the daily drudgery is certainly lessened. It may be possible for me to actually miss the odd days' penance for having too many orchids.

One of the saddest sights of all has to be entering someone's bushhouse once they have given in to the dark side of their watering obligations. Plants defoliating all over the place, shriveled up new growths, the lack of that freshness that always accompanies a well-maintained collection. And of course there's the battery of excuses that is offered for not watering ... you know the story.

The bottom line is inescapably laziness caused by air-conditioned houses, the latest cricket match on the idiot box or the numbing effect of a cold beer during summer's heat. (The same things that prevent people writing articles for orchid journals.) Laziness is usually most obvious in the seedling trays where rows of 50 mm pots display parched stumps – the remnants of some devoted breeders' dream. If only they had been watered more often. There is something to be said for a small manageable collection.

Some geniuses have gone to the expense of installing automatic watering systems complete with solenoid switches, chrome plated timers and cubic zirconium fog nozzles. I don't like these because I can't afford them. My bush house is too big and I'm too poor. As well, I doubt they work without having their own peculiar problems. You must have good mains water pressure for a start. Even then the nozzles may block up and cause you a real headache.

I did have one of those cheap black plastic systems in my old bush house. But I found it didn't cover all the orchids no matter how hard I tried to arrange the nozzles. In the end I had inserted so many that the main water pressure fell away dramatically. I issued a decree to all the neighbours that they weren't to shower or flush their toilets without my permission but this created ill feeling – particularly with the people over the back fence.

The main long-term problem was definitely some orchids getting too dry and others getting too wet. Potted plants would get drowned, particularly when I didn't want them to, which was nearly right through winter. Flower spikes were another worry. Hand watering allows you to wet only those orchids that you want to. It also ensures that you cast a discerning eye over every single orchid each time you water. Any problems are then picked up in the early stages. I must admit though, that the automatic system would be a great asset during those seven or eight days of summer when the temperature hits the 40s and the attending dry winds singe your eyebrows.

I doubt there is anything more dangerous then trying to explain to a novice grower that a plant should not be overwatered. This tends to lead to wide-eyed assurance and exaggerated affirmative head nodding, along with heart-wrenching promises that such a mortal sin just will not happen. So his/her new specimen may end up crucified in a high up corner of the bush house, literally not receiving excess water. Some common sense just has to be applied.

Watering is an art that can only be developed by the individual. Heavy watering, light watering, only you can decide. One of the biggest mistakes that novice growers repeatedly wreak on poorly performing orchids is to 'give it more water'. I used to do it all the time. I still get fooled from time to time. You know the tale; a plant sits in the pot, loosing leaves and new growths rotting off. More water is rarely the answer unless you've reduced your watering to ridiculous levels. Repotting is nearly always the cure – fresh potting mix often works miracles.

So if someone gives you a piece of a rare or hard-to-grow orchid, or even a shrub that promises salvation to the entire human race, along with retribution for all Parramatta supporters, you must quickly come to grips with its water requirements. Keen observation on a weekly basis is mandatory. Don't rely on vague instructions on the label. Or if the grower says he waters it heavy, or frequently, or whatever, you must remember that his idea of watering is undoubtedly different to yours. Think for yourself.

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Ira Butler Trophy Winners for 2000

The winners of the prestigious Ira Butler Trophy for the year 2000 have just been announced.

Congratulations to Norm & Kay Mitchell who won this years Gold Ira Butler Trophy for Champion Australian Hybrid orchid with the following (as yet) unregistered hybrid, bred by John Purvis;

***Dendrobium* (Jesmond Glitter x Zip) 'The Star'**

Les Nesbitt won the Bill Murdoch Trophy with a fine exhibit of;

Caladenia filamentosa

A full report from I.B.T.C. Secretary, Roslyn Capell, will appear (with photos) in the next issue.

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Nomination of Helen Richards for the R.D. FitzGerald Trophy

by The Australasian Native Orchid Society (Victorian Group) Inc.

Helen Richards' dedication and unerring quest for improved knowledge on the propagation and cultivation of Australian terrestrial orchids is the reason for this nomination. The R.D. FitzGerald Trophy is another initiative of the Ira Butler Trophy Committee to recognise outstanding service to the advancement, propagation and conservation of Australian native orchid species. We support the nomination with the following listed, more or less, in chronological order, not necessarily in order of importance.

First Steps - ANOS Victorian Group

With a life long interest in native plants, and native orchids in particular, Helen Richards joined ANOS Victorian Group in 1974. At her very first meeting a request was made for a librarian. Typical of Helen, she put up her hand and took on the task. She was the Victorian Group's Librarian for one year. In 1975, Helen was elected to the ANOS Victorian Group Committee, serving for a total of 17 years. During that time she was Editor of the *Bulletin* for four years, Show Convenor for two years, Vice President for five years and President for three years. (Incredibly, in the history of the ANOS Victorian Group, Helen has been our only female President.) She has also been ANOS Parent Body Liaison Officer, travelling to Sydney to represent Victoria at ANOS Annual Meetings and Advisory Committee Meetings. Her time at the helm proved Helen is an exceptional administrator with a clear mind and adept at resolving difficulties and problems. Her skill at managing people (volunteers) and inviting active participation from reluctant people is legendary. Successive committees have felt the benefits of her earlier participation. Helen is still working in the background and was a member of the 4th ANOS Conference Planning Team. Helen is currently a member of several other ANOS groups.

The *Bulletin*

After resigning as Editor of the *Bulletin* (ANOS Victorian Group newsletter), a position she held for four years, Helen continued to play an active role on the *Bulletin* Production Team. She has proof read almost every newsletter (for two subsequent editors) for over 20 years. Her knowledge of taxonomy, her ability to detect spelling, grammar and/or typing errors, her diplomacy and down-to-earth common sense have been invaluable aids to her successors and reflect the pride taken in this newsletter. Should Helen not know the answer to a technical problem, she will invariably refer to her extensive library, undertake research, or telephone appropriate scientists until she finds an acceptable answer. When she sees the need, or when a special issue arrises, Helen will write an article for inclusion in the *Bulletin*. Her essays are written in terms that every member can understand and are aimed at educating and encouraging less experienced growers and, where appropriate, stressing the need for conservation. As the winner of over 50 ANOS Victorian Group Cultural Certificates, Helen has provided numerous, beautifully written, sets of cultivation notes for the newsletter.

Cultivation of Australian Native Orchids

Few people would know of the enormous effort Helen put into co-authoring and editing ANOS Victorian Group publications. *Cultivation of Australian Native Orchids*, first edition, was written at a time when growing Australian native terrestrial orchids was in its infancy and the information contained therein made a huge difference to the popularity of the hobby and to the conservation of native orchids generally. The second edition made another giant leap forward with 96 pages of text, drawings, photographs and diagrams designed to assist growers of Australian native orchids.

Publications

Helen has also written articles for inclusion in magazines and periodicals including: the *Australian Orchid Review*, *Gardening News* and the *Orchid Review* (English). "Where I have endeavoured to enlighten people in the pleasures and importance of the cultivation of Australian terrestrial orchids, with an emphasis, where appropriate, in conservation." (Helen Richards pers. comm.) She has written cultivation notes of *Diurideae* for Volume 2 of *Genera Orchidacearum* (in press).

Tuber Banks & Distribution of Terrestrial Orchid Species

An enthusiastic supporter of the Society's Tuber Bank (established in 1970), Helen regularly donates large quantities of tubers for distribution amongst other growers. On numerous occasions, she has presented a novice grower with a pot or two of terrestrial orchids to encourage this newly discovered interest. Experienced terrestrial growers have also benefited from her generosity for Helen has often given a pot of rare, endangered or difficult to grow species to another grower, her philosophy being that all known plants of a particular species should not be held in an individual collection, but should be spread amongst competent growers in case one person "has a disaster". Helen also supports ANOS Geelong Group and N.O.S.S.A. Tuber Banks.

Experimentation

One has only to talk to Helen to realise she has an enquiring mind, and is a genuine naturalist with keen observation and intelligent comprehension. She rarely accepts hard and fast rules at face value, but always wants to know "why?" On many occasions, when someone has told her she must do something such and such a way, she has conducted experiments on plants in her own collection in order to find a better method. In many instances she has succeeded, and has generously passed on her findings to other growers, either by word of mouth or through the Society's newsletter. One example is the planting of terrestrial tubers. Growers are told to pot tubers, "shoot side up". Helen wondered what would happen if a grower made a mistake and planted the tubers "shoot down". A common, easy-to-grow species of *Pterostylis* was used for the experiment and Helen carefully recorded the number of tubers planted into the pot. Eventually the orchids' leaves emerged, at which stage she tipped out the contents of the pot, discovering that all but one plant had found its way to the surface, the emerging shoots growing downwards, before making a "U" turn and growing upwards in the normal way.

Helen has also experimented in propagating terrestrial orchids by artificial stimulation. Circa 1980, Mr. Les Nesbitt, a noted terrestrial orchid grower from Adelaide, wrote to Helen explaining a new method of orchid propagation, namely "tuber removal". Since being told of this method, Helen has attempted tuber removal on many species. Over the years, she has determined which species in her collection will most readily develop a second new tuber (after the first replacement tuber has been removed from the parent plant). She has discovered that the tuber removal method is successful on *Pterostylis*, *Thelymitra*, *Diuris* and *Eriochilus*, but is not suitable for *Caladenia* or *Glossodia*, species that have a fibrous sheath surrounding their tubers. She has also experimented with the timing of tuber removal to determine at what stage in its development the "removed" tuber has the best chance of development; and when the parent plant has the greatest chance of producing a second replacement tuber. The tuber removal method is an important way of gradually increasing numbers of solitary species (non-colony forming species that replace their old tuber with one new tuber) in cultivation. A lot of plants can be propagated by cuttings, why not orchids? Helen has experimented with the "tops" of orchids (orchids that have, for various reasons, lost their tubers) to learn from what parts of a plant can be stimulated to grow.

Education

No other member of ANOS Victorian Group has done more to educate others about terrestrial orchids. At meetings and at society shows she has often given prearranged terrestrial orchid potting demonstrations. On many other occasions, a question from someone will lead to an impromptu demonstration. Helen has patiently shown others how to "tuber remove", a method of terrestrial orchid propagation usually attempted only by experienced and confident growers. Helen has frequently invited other growers to visit her private collection, not with the sole intention of showing them a shadehouse full of pretty flowers, but to give practical advice and demonstrations on the care and propagation of terrestrial orchids. New Members Group, Terrestrial Study Group and even Epiphyte Study Group members have enjoyed and benefited from educational sessions at Helen's home. For example, when the New Members Group arranges a visit, Helen will often give a "hands on" lesson on different aspects of terrestrial orchid culture. Members of a group may be shown the best method of watering terrestrial orchids and receive an explanation as to why a particular type of hose rose works best. On another occasion her lesson may include the importance of light and, as part of the educational process, she will produce a pot (usually of a common species) that she has deliberately placed in the wrong position in order to show what happens when a particular species' preferred light level is incorrect. Several years ago, she initiated an "Annual Potting Day" at her home (in Croydon) with the purpose of showing new growers the basics of terrestrial orchid cultivation.

At Society shows and displays, Helen enjoys talking to members of the public. She is a born teacher with a gift for imparting knowledge in crisp, descriptive phrases and will spend hours telling visitors about native orchids, pitching her "lesson" to each individual's level of understanding. We are sure that many new recruits made the decision to join our Society because of Helen's genuinely friendly manner, her skill in promoting native orchids, and because of her obvious enthusiasm. Her intelligent, clear-thinking approach to items under discussion is always refreshing and valuable, and her ability to articulate her point of view is impressive and persuasive. Her concern for conservation issues and the importance of habitat preservation is always apparent. We have no doubts that the sustained interest in terrestrial orchids and the high degree of skill shown in their cultivation by members of ANOS Victorian group is in no small way due to Helen's vigorous and long-standing enthusiasm.

Encouragement

Members of all levels of expertise are drawn towards Helen. She is a very "giving" type of person. She "gives" advice and "gives" encouragement. She expertly encourages people to follow their own particular areas of interest within the native orchid community. Malcolm Thomas, who is now one of the Victorian Group's most successful growers of terrestrial orchids, writes: "As a new and somewhat knowledge-less terrestrial orchid enthusiast, Helen took me under her wing, firstly with advice and encouragement and later in supplying plant material to keep up my interest in this new found pastime. Since then, the growing of Australian terrestrial orchids has become my consuming interest, which has carried over into my retirement years. I have no doubt that without Helen's encouragement; my flash-in-the-pan interest in 1980 would never have developed the way it has done. I am but one of many enthusiasts whom Helen has helped over the years and my best description of her involvement is to say she is an encourager, a motivator, an incredibly positive person and sometimes a prompter of people to get them involved in various aspects of Australian orchids."

Cultivation

Helen's own (extensive) terrestrial orchid collection is proof of her skill and dedication and she has been awarded many Cultural Certificates for her beautifully cultivated plants. (ANOS Victorian Group is a non-competitive society, but awards for excellent cultivation may be made at monthly meetings and are awarded at the annual Spring Show.) Since the inception of the Cultivation Certificate awards circa 1974, Helen has received over 50 Cultural Certificates. (This total includes the Phil Mims Prize for Best Cultivated Terrestrial at a Spring Show, which Helen has won on quite a few occasions.) She has twice won Best Cultivated Hybrid, an award that can be given to an epiphyte or a terrestrial, with a pot of *Thelymitra* Kay Nesbitt, named after her late friend and probably the only man made hybrid in Helen's terrestrial collection.

Conservation

The "custodian" of a large collection of legally collected Australian native terrestrial orchid species, Helen is dedicated to the preservation and conservation of orchids in the wild. She has been a mentor and guiding force in bringing more people to a deeper appreciation of the conservation values and joy of native orchids. She is in the vanguard of stalwarts who give unselfishly for the betterment of orchids and the orchid appreciating community, often supporting and encouraging others in campaigns to have known orchid areas preserved (e.g. Great Ocean Road/O'Donoghues Land Appeal, Ballarto Road extension Botanic

Gardens Cranbourne, *Diuris* sp. aff. *lanceolata* at Altona and, recently, an undescribed *Caladenia* at Kilsyth). Every now and then, when a local orchid is under threat, Helen is often asked by concerned people "What should I do? Who should I contact?". On several occasions she has arranged rescue digs on land (in the Eltham area in particular) that was being subdivided. Typically, when she and her husband were searching for a farm on which to retire, Helen said "there must be orchids on the property". Eventually, they purchased a farm at Yarra Glen and the Richards have told many friends that a substantial orchid-rich area will be left in its natural state.

Speaking Engagements

Helen has occasionally been invited to present an item of the evening at one of the ANOS Victorian Group's monthly meetings. As well as being educational, her talks are always meticulously researched and beautifully presented. Her obvious enthusiasm for her subject is inspiring and her themes always lead to aspects of cultivation and conservation which are her true goals in this passion she has for orchids. Helen has also given talks at numerous generalist orchid clubs, S.G.A.P. Groups and garden clubs throughout the Melbourne Metropolitan area and country Victoria, many of which could be titled "An Introduction to Growing Australian Native Terrestrial Orchids". Helen has also spoken at interstate orchid clubs and has presented papers at a number of orchid conferences.

Life Membership – ANOS Victorian Group

At the Society's 21st Birthday celebrations in 1989, Helen was awarded Life Membership of ANOS Victorian Group for her enormous contribution to the Society. She is currently the member who has regularly attended our meetings for the longest period.

ANOS Geelong Group

During the time that Helen was President of the Victorian Group, she initiated the idea of forming a Group in Geelong and enthusiastically followed this idea to its successful conclusion. On Tuesday the 9th of June, 1987, Helen chaired the inaugural meeting of ANOS Geelong Group, when it was formally approved and office bearers elected. Since formation, Helen has supported the Group each year with a supply of tubers, in this way encouraging members to become growers of terrestrial orchids, and has been the speaker at several meetings, explaining the best ways to achieve results in the growing of these orchids.

Australian Orchid Foundation

Helen Richards was invited to become an associate of the Australian Orchid Foundation circa 1987 and has been a Director of the AOF since 1991. Eric Wilde, Director of the Australian Orchid Foundation writes: "Helen is an important member of the AOF team. She acts/interacts on behalf of the plants, their habitats, private growers and as a general representative of ANOS." Always thinking of ways to promote the AOF and raise money for orchid research, Helen supplies at least two pots of terrestrial orchids for the ANOS Victorian Group's monthly special effort. The cost of the orchids is accumulated and, at the end of each year, funds forwarded to the AOF.

Royal Melbourne Zoological Gardens

John Arnott, Head of Horticulture at Royal Melbourne Zoological Gardens writes: "Helen Richards introduced terrestrial orchids to Melbourne Zoo horticulture. Her initial support was through donations of plant material to be introduced into the Endangered Grasslands display. Helen, however, provided much more than plant material, she provided guidance, technical support and a level of enthusiasm that was contagious. Helen has been an avid supporter of the *Diuris fragrantissima* program at Melbourne Zoo and has distributed plant stocks amongst the ANOS network of terrestrial specialists."

Royal Botanic Gardens, Melbourne

During 1993, the *Caladenia rosella* Project at the Herbarium, Royal Botanic Gardens Melbourne, received funds from the Australian Orchid Foundation, ANOS Victorian Group and S.G.A.P. Maroondah Group. The aim of the program was to re-introduce seedlings of *C. rosella* into the wild in order to supplement greatly depleted populations, establish monitoring programs for a number of rare and threatened species; collection and isolation of mycorrhizal fungi and develop methods for symbiotic and asymbiotic germination. Supervised by Mr. Rob. Cross, Andrew Batty was the original employee for the project. Mr. Cross writes: "Helen Richards' enthusiasm is one of her most striking characteristics, and her love for Australian orchids reflects this. Helen was an important contributor to and motivator for the Royal Botanic Gardens Melbourne's new Integrated Conservation Program in the early 1990's. The Program was set up primarily for the conservation of threatened Australian terrestrial orchids, and it was designed to complement the *in situ* conservation management of the orchids by the Victorian Department of Conservation and Natural Resources (DCNR).

Helen assisted the Royal Botanic Gardens program in a number of ways. She was always available to share her considerable knowledge, and she readily facilitated contacts with others in the orchid community including Kingsley Dixon and Mark Clements. Helen assisted the Royal Botanic Gardens to source funding necessary for the purchase of equipment for the new laboratory, and also supplied orchid seed for the symbiotic germination trials being developed at the Gardens. Helen deflasked some of the plantlets produced by the Integrated Conservation Program, and keenly followed the progress of the Program. Helen also contributed to the conservation of terrestrial orchids through a series of integrated conservation meetings held at the RBG, which also included representatives from the Royal Botanic Gardens, DCNR and Latrobe University. Helen maintains contact with the terrestrial orchid research work at the Gardens, and orchid conservation in general. She is a member of the Native Orchid Growers Network, a group promoting the exchange of information about the propagation and cultivation of orchids. The Network includes individual growers, the Royal Melbourne Zoological Gardens, Alcoa, the Royal Botanic Gardens and the Department of Natural Resources and Environment."

Assistance To Professionals

Helen is without exception the acknowledged expert in growing and cultivating our terrestrial orchids and in identifying them. She is also able to translate this knowledge to the particular audience whether a botanist or an amateur grower. It is when working with professionals that her overriding interest in Australian native terrestrial orchids is given full reign. Helen and Barry Richards were honoured when, in recognition of their assistance in his research, David Jones named an orchid after them – *Caladenia richardsiorum*.

Dr. Colin Bower;

"Helen is not only one of the best growers of our native terrestrial orchids, her collection is fully and carefully documented as to the origins of each accession. This combination of 'green fingers' and fastidious data recording makes Helen's collection one of great scientific importance. For these reasons, I have been able to use flowers from Helen's collection for my pollinator studies and have great confidence that they come from the particular populations and localities I am seeking. Having access to such a collection has been of great assistance to my studies. Helen is able to post flowers to me, thereby saving me from travelling hundreds of kilometres to collect field material. In the case of some rare forms, Helen's collection is the only readily available source of material for field testing for pollinators."

Dr. Mark A. Clements;

"Since the early 1970's Helen has approached the problem of the cultivation of orchids in a systematic manner, experimenting and developing methods and mixes for that purpose. She now has extensive knowledge of the methods for the propagation of the majority of Australian native terrestrial orchids, and grows and has had many of them growing superbly for many years. Her contribution in this field cannot be overstated. She literally has taken the mystique out of growing native terrestrial orchids and made it a repeatable process. Additionally she has willingly imparted this knowledge to others.

At the national level, Helen has made a major contribution to the Centre for Plant Biodiversity Research, Orchid Research Group's study of the systematics of the Australian Orchidaceae. As a person who can reliably cultivate many temperate Australian terrestrial orchids, her contribution has proved invaluable because she has been sent material of many species from throughout Australia, cultivating them successfully to flower. Material sent to Canberra from these collections, all of known origin, have been essential in assisting with determination of the status of many species. The reliability of her record keeping, and maintenance of the integrity of collections, makes her contribution all the more valuable. Additionally, the successful cultivation of many of these collections has meant excess tubers have been distributed to society members thus enhancing the chances of survival in cultivation of particular species. It also reduces the desire for the re-collection of many species, especially when a number of them are rare. Helen's contribution to conservation has been outstanding through her efforts to propagate species, through the dissemination of excess tubers through the Society tuber bank, through collection of seed from rare plants and encouragement of others (both myself and people like Andrew Paget) for the *in vitro* propagation of these plants, has been outstanding. She has been involved in attempts at the conservation and propagation of several rare and endangered orchids, such as *Diuris fragrantissima*, especially in Victoria."

Mr. David L. Jones;

"Helen assisted my research by cultivating orchids on my behalf and sending on living material as it becomes available. This contribution should not be underestimated and needs some elaboration. Firstly her collection is of major importance because the provenance details are faithfully recorded and we are sure of the localities of the material she provides. Secondly the material is healthy and well grown and she is very generous in giving me first call, sometimes even before orchid shows. The material that is passed onto Helen by me often originates as sterile plants which I have collected from some out-of-the-way or really remote locality that I have little hope of returning to check on later flowering. By cultivating these plants Helen (in most cases) is able to provide answers that are not otherwise available. Sometimes these turn out to be new species, in other cases they prove to be valuable extensions of range or add details of variation not previously observed. Her persistence and cultivation skill is exemplified by a *Chiloglottis*, which I collected in Queensland in 1987 and she finally flowered some seven years later. Plants also come to me via external collaborators and these are frequently sent to Helen for the same reasons given above. With these she has achieved some remarkable successes from material, which can best be described as fragmentary (that is a leaf with some underground bits but no tubers). From such material I was able to solve a problem in a South Australian *Corybas* and Helen was able to introduce into cultivation a delightful albinistic green-flowered variant of *Corybas diemenicus*. Her success with the cultivation and flowering of *Corybas* is quite special.

Helen's general collection is also regularly plundered by others and me for various purposes. For example as a source of fresh material for examination under the Scanning Electron Microscope; as a source of pollen for the pollen research program; as a source of flowers for pollination studies; and more recently as a source of DNA. Helen has made special field collections of many taxa to assist in my research, including the type specimens of *Corybas incurvus* and *Dipodium roseum*. Helen has very strong conservation ethics and firmly believes that cultivation programs can assist with the conservation of rare or threatened species. She has hand-pollinated her plants of such rare species as *Caladenia calcicola*, *C. hastata*, *Diuris fragrantissima*, *D. disposita* and *D. flavescens* and provided the seed for germination studies.

Mr. Andrew Paget;

"I was involved with Helen in running the Seed and Protocorm Bank for the Australian Orchid Foundation. During the time I have known her she has always made time to support endeavours to conserve, propagate, and disseminate information and knowledge about our native ground orchids. Helen has been a keen supporter of the propagation work that I have undertaken to master the flasking of terrestrial orchids, and has been a supplier of seed for my flasking program."

In Conclusion

Helen Richards is a very special lady who has devoted much of her life to improving the knowledge on the propagation and cultivation of Australian native orchids. She stringently adheres to the principle of promoting the conservation of native orchids through cultivation and through preservation of their natural habitat.

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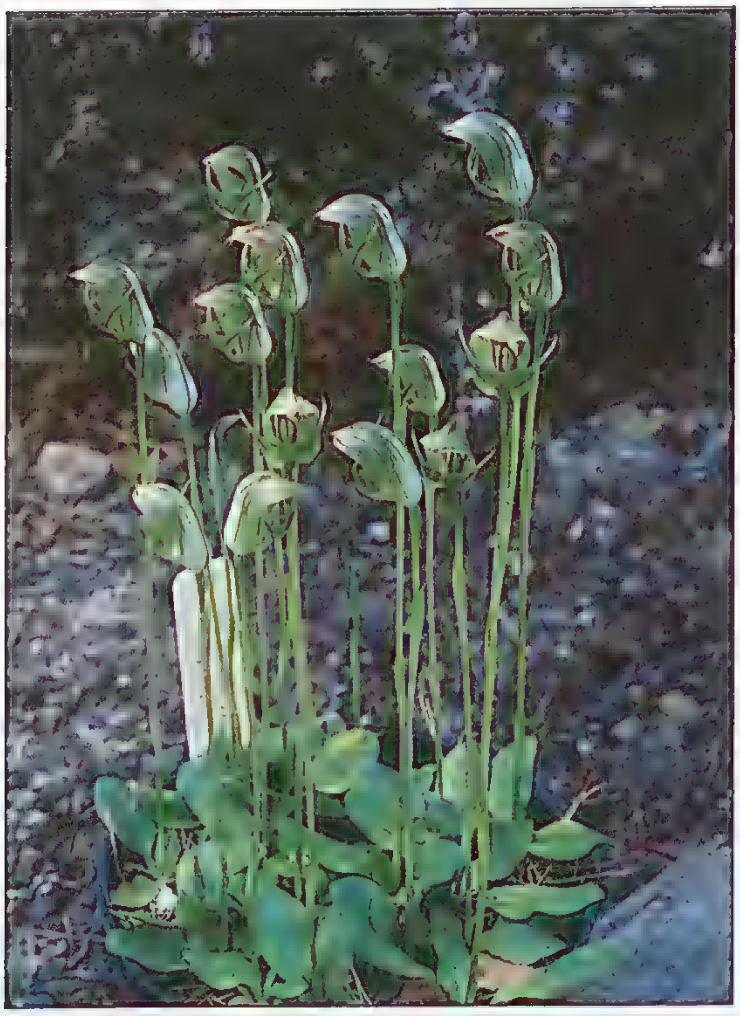
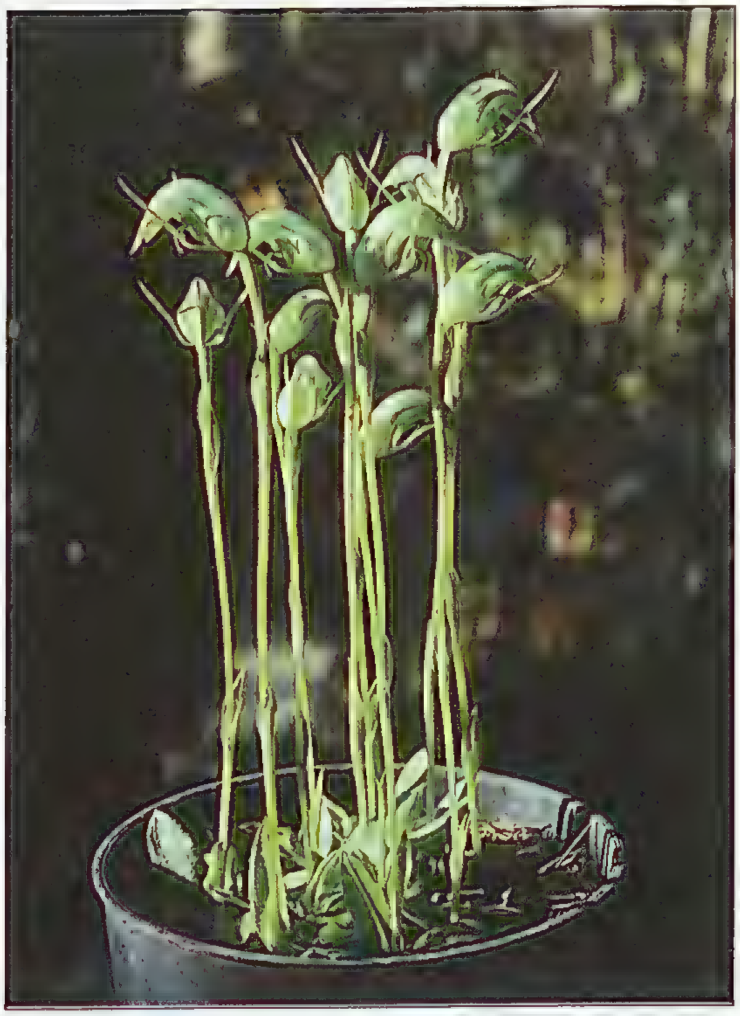


H. Richards

Pterostylis curta



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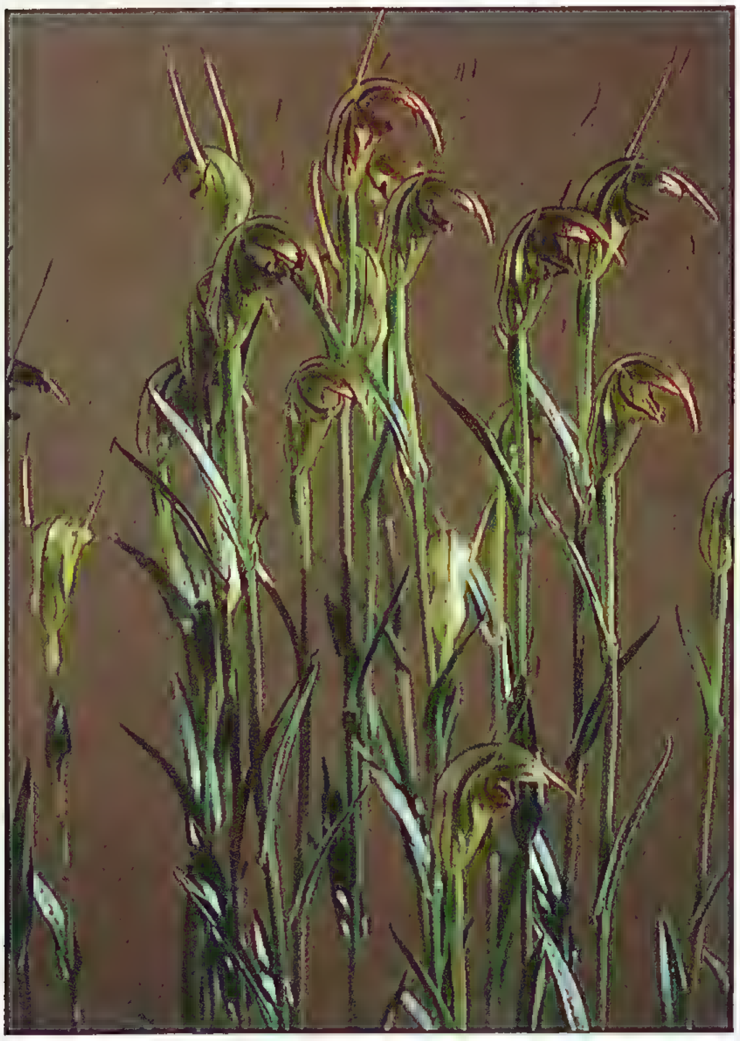

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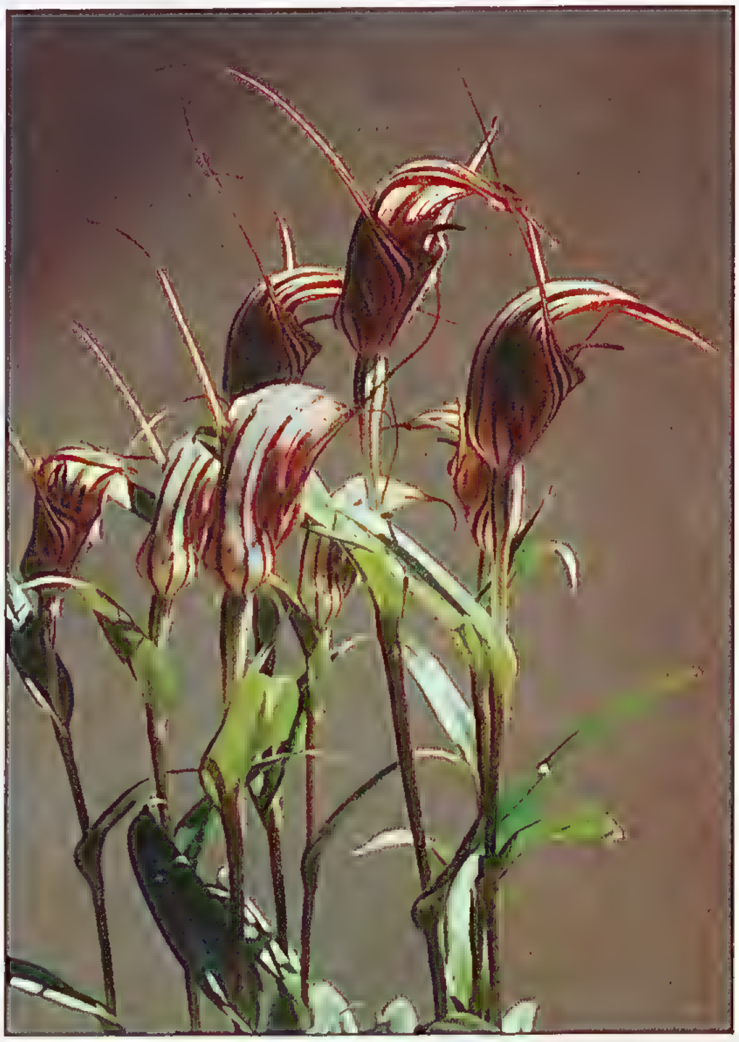

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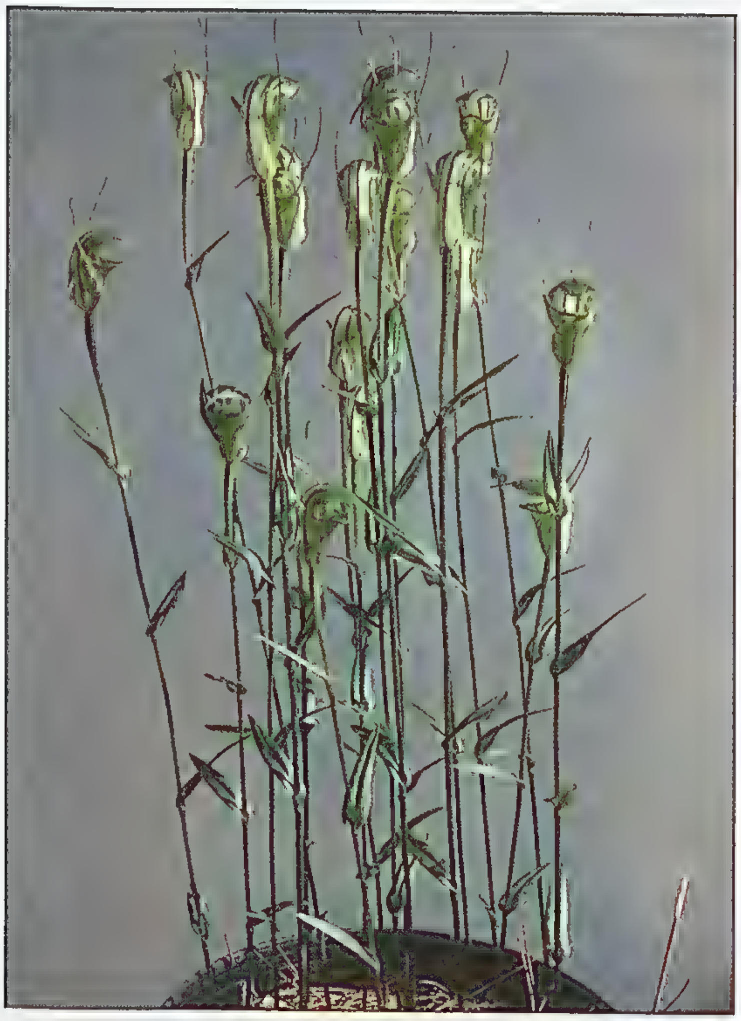
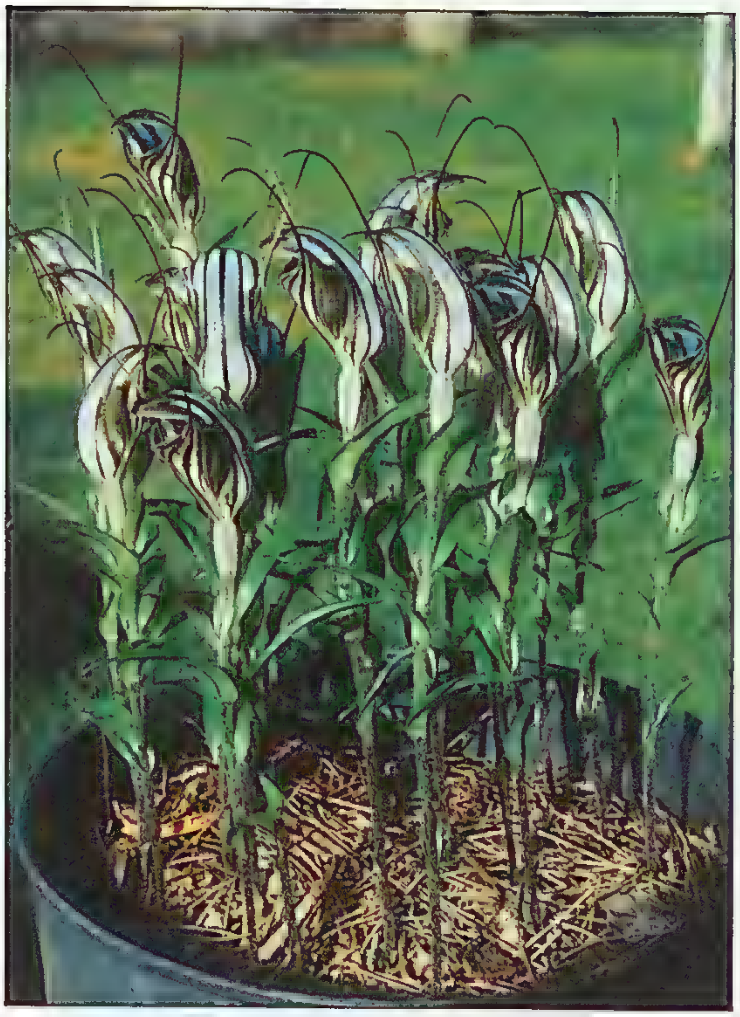


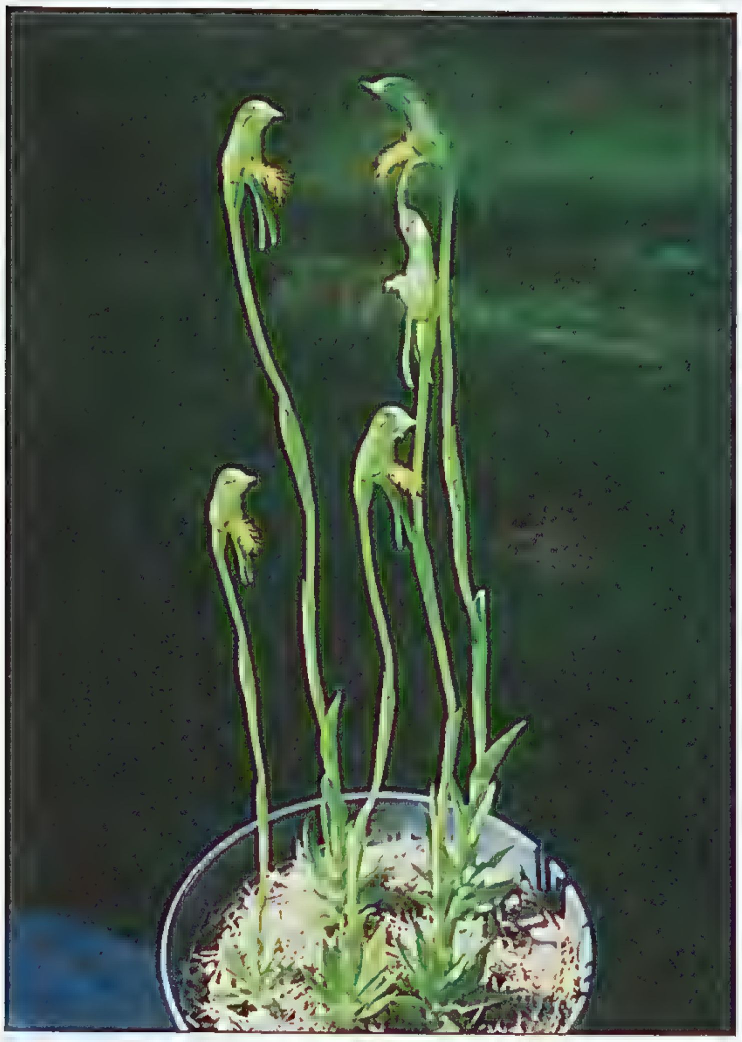
H. Richards

Pterostylis obtusa



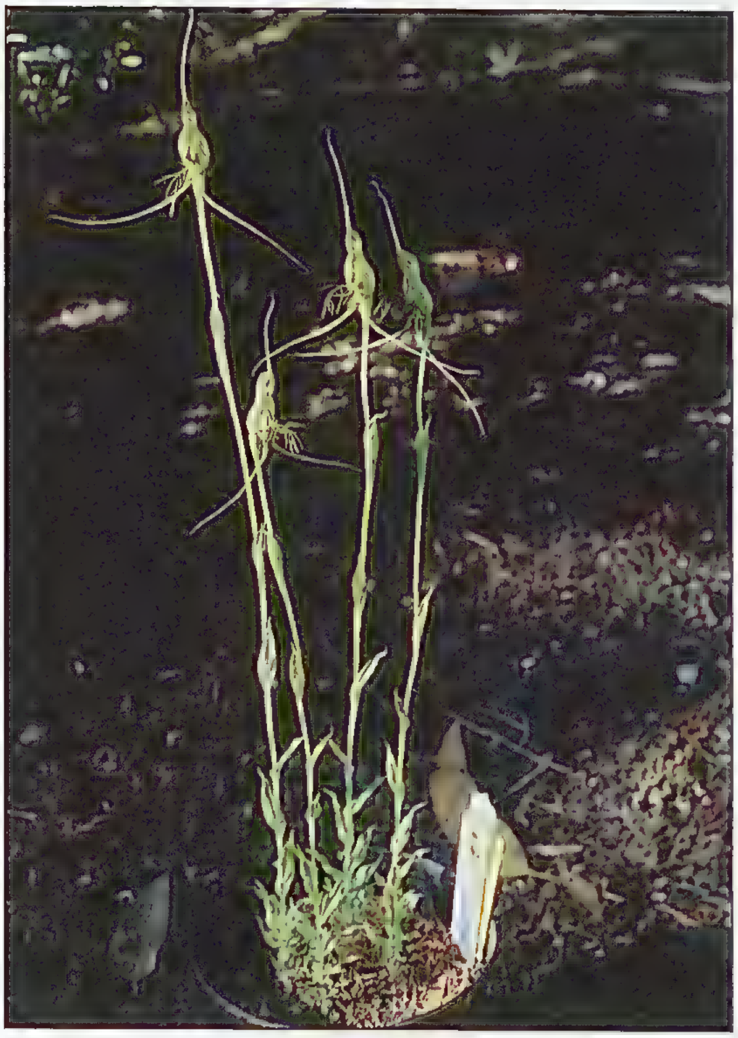
H. Richards

Pterostylis robusta



H. Richards

Pterostylis tasmanica



H. Richards

Pterostylis turfosa

Cultivation of *Pterostylis*, the "Greenhoods"

Helen Richards
P.O. Box 440, Yarra Glen Vic. 3775

The recent ANOS Conference in Melbourne should have inspired many visitors to appreciate and perhaps even grow some of our terrestrial orchids, in particular the "greenhoods". There is a huge number of *Pterostylis* species which range from those that even a novice would find hard to kill to some of the most difficult to keep alive in cultivation, so there is something for everyone.

Pterostylis can be first divided in the colony formers and solitary species. Colony formers on a whole are easier to grow simply because they make more than one new tuber each year, so the odds are that if you lose some, the others in multiplying will make up the losses. With the solitary species, which only replace their tubers, there is no room for error. If you lose half of your plants, that's it.

I have my *Pterostylis* arranged in my shadehouse in groups according to their different requirements and they are divided up more or less as follows.

My first group is the summer/autumn-flowering colony formers, whose flowering plants have cauline leaves (leaves arranged up the flowering stem) and whose non-flowering and juvenile plants have a ground-hugging rosette of leaves. The second group is the winter/spring-flowering colony formers whose flowering stem arises from a basal rosette. The third is the late spring-flowering colony formers some of which grow in colder areas of Australia, so have to be kept cooler and damper for longer than the others. The fourth group is the solitary winter/spring-flowerers and the last is known as the "*rufa*" group.

The first thing to be considered is what to grow them in. Whatever you use must provide the plants with support, nutrients, water and air. Various growers use many different ingredients to achieve this result. All my *Pterostylis* are grown in a basic mix comprising leaf mould, buzzer chips, loam and coarse sand and for the most are in the proportions 1:1:1:2. All these ingredients are readily available so that I am able to produce the same mix reliably year after year.

Leaf mould: I rake up eucalypt leaves from the side of the road from wherever I see them. I store them damp for six months so that the breaking down process is well underway. I add a little blood and bone to this to help replace the nitrogen used up by the microorganisms that proliferate as they eat away at the eucalypt leaves. The leaf mould from eucalypts retain some structure, so I prefer them to others which when broken down are too fine and mushy. The leaf mould provides nutrients for plants and microorganisms in the mix.

Buzzer chips: These are wood shavings from a machine called a buzzer or thicknesser. They are harder for the microorganisms to break down than leaf mould so act as a slow release food and their structure helps with the drainage of the mix. I sieve out any sawdust through a 3 mm (1/8 inch) sieve. The buzzer chips are stored damp for at least 6 weeks to remove phytotoxins present and a little blood and bone is added as with the leaf mould to replace nitrogen loss. Buzzer chips from western red cedar (resin content), treated pine (arsenic content) and chipboard (glues) are not used for obvious reasons.

Loam: A good friable loam supplies essential plant nutrients and aids in moisture retention.

Coarse sand: This facilitates good drainage of all of the above. The particle size of the sand I currently use is from 1-6 mm, with more of the coarser than finer. Sand is available from nursery suppliers in various grades and can be sieved to size if necessary.

The pH of the above mix is around 5, suitable for most Australian species. Species occurring in lime areas can have the pH of their mix adjusted to neutral by using garden lime or dolomite.

My collection is housed in a shadehouse with shadecloth walls of varying thickness and a solid transparent roof, which has shadecloth added/removed according to the time of the year. All benches are waist high to deter crawling pests and are made of wire mesh to give good air movement around the pots.

My pot size is almost invariably 150 mm black plastic, tall, with plenty of drainage holes. These pots drain well and retain enough moisture after watering for good plant growth and don't dry out too quickly. It is important that the moisture level in the pots remains reasonably constant during the growing season. I plant 20 tubers of colony formers into this sized pot, which allows plenty of room for growth.

Watering is by hand, because of the solid roof. Plants are watered according to their growing state and as I have some *Pterostylis* out in any month of the year, there is always something in active growth, which therefore needs to be kept damp. Melbourne's winters are too wet and stormy to achieve optimum growth without some sort of cover. They will certainly grow under shadecloth or out in the open but are more liable to rotting from excess rain or flower damage from rain and storms.

The first group are the summer/autumn bloomers. The tubers put out their new shoots from mid-December and flowering plants emerge during January to May. *P. abrupta* and *P. coccina* are two of the earlier ones, followed by *P. laxa*, *P. truncata* and many others. Several recently described species fall into this group, e.g. *P. metcalfei*, *P. elegans*, and *P. scoliosa*. *Pterostylis hians* (Opera House Greenhood) is a very important species. Recently described and only known from a very limited area, it now appears to be extinct in the wild (due to overcollecting). Fortunately it does well in cultivation in Melbourne, so hopefully it can be reintroduced in its natural habitat in time. Flowering plants in this group have cauline leaves and non-flowering plants a basal rosette. Many species are poor flowerers, a pot-full of rosettes being rather disappointing compared with a pot-full of flowers. The frequently asked question here is, "How do you get them to flower?" I do not have a foolproof formula, however two contributing factors are the size of the tuber and when pots are watered. I pot up the 20 biggest tubers for myself and keep them damp from the time I would expect them to normally start growing, i.e. from mid-late December for the early flowerers to late February for the later flowerers. The big concern with having them damp over the hot weather is that the plants are more prone to rotting. It this starts to happen (flowering stems falling over) I dry them off a little to limit fungal growth and improve the air movement around them. The later-flowering species, e.g. the *P. alata* and *P. robusta* groups do not start shooting until late February/early March so watering should not be commenced too early. As these are colony formers, I repot them each year to prevent problems from overcrowding, using half old and half new mix. By the way, tuber banks always welcome excess tubers!

The next natural group is the winter/spring flowering *Pterostylis*. The rosettes appear first and flowering stems arise from the centre of the rosette late in autumn and winter. The earlier ones of these include *P. hispidus*, *P. anatona*, and *P. ophioglossa*. This group also includes the ubiquitous *P. nutans* and the spectacular *P. baptistii*. They are colony formers and generally easy to grow. They are also repotted each year into half old and half new mix, with excess tubers being sent off to tuber banks. If they are not repotted regularly the tubers get smaller and smaller due to overcrowding. They are also more prone to tuber rot as the mix breaks down and is slower draining, and they will not grow to their full potential.

The third group of colony formers in my mind are the late spring to early summer flowering species. They are a little different in that their moisture level must be maintained as they are actively growing when most other *Pterostylis* have dried off. They include *P. falcata*, *P. scabrida*, and *P. decurva* (cauline). *Pterostylis decurva* is an odd one in that the new cauline flowering plants appear through summer as the old rosettes are drying off, so sometimes repotting is a bit difficult, with care taken so not to break the brittle new shoots. I try to keep them all cool and shady to match their natural habitats. Most are repotted annually.

Now to the more difficult *Pterostylis*, being the solitary species. When the plant generally only makes one replacement tuber, there is no room for error. This group includes *P. daintreana*, the *P. parviflora* group, the *P. longifolia* complex, and the *P. plumosa* group. I vary the basic mix for this group by adding an extra 1/5th part of sieved coarse sand (3-5 mm), which gives a very free-draining mix that retains less moisture, so that tubers are less likely to rot off. I cover the top of the pot with coarse sand, rather than *Casuarina* needles, to give better air movement around the base of the stem. They are watered from late February until they dry off (usually sometime in October). I take care not to over-water them. They have to be actively propagated, i.e. by tuber removal sometime in August or from seed sprinkled around the parent plants preferably in March or April. Sometimes they will make an extra tuber themselves, but more often than not their numbers will gradually dwindle unless some measures to propagate them are taken. These are repotted every 2-3 years to keep the mix free draining.

The last group I find the most difficult, especially the "*rufa*" group. I include in this group solitary species from drier areas. They include *P. mutica*, *P. bicolor*, *P. cycnocephala* and the *P. rufa* group. I grow them in a very gravelly version of the basic mix, with at least 1/5th extra sieved coarse sand added, probably more. The top of the mix is covered with 6-7 mm coarse sand. The water readily flows through the mix and I make sure the tubers are planted fairly high in the pot so that the excess moisture drains well away from them. Plants are watered (but not overwatered) during the growing season, but watering is reduced dramatically once the rosettes start to yellow and dry off, which is frequently before the plant has flowered. Overwatering at this time will cause the tubers to rot away. Plants are usually solitary so have to be propagated by tuber removal or by sprinkling seed around the parent plants. This group is positioned in a lighter area of the shadehouse, adjacent to *Diuris*, say 25% shade, while the others are in what I call 50% shade. They are repotted every 2-3 years.

Pterostylis suffer from the usual range of pests including aphids, red spider and thrip. He leaves can also be very appealing to slugs, snails and caterpillars. One also has to be on the lookout for evidence of fungal disease (leaf rots, damping off of flower stems) and the dreaded virus. (See the *Australian Orchid Review*, June/July 2000). It is very important to look at your plants regularly so that problems can be recognised early and acted upon. Measures such as removing infected leaves, reducing watering and improving ventilation for fungal disease, destroying any plants showing symptoms of virus and keeping pests down which can transmit disease. I don't use any extra fertilisers on my plants, as they obtain their nutrients from the basic mix.

I would be glad to hear other enthusiasts comments on growing *Pterostylis*, especially the solitary species. One can learn so much from other growers. If it weren't for John Riley, I would have lost all my *P. pulchella*. He said to me one day, "They don't grow in the waterfalls, just near them: don't overwater them" I was down to one almost drowned tuber. Since then I've grown them as other autumn-flowering *Pterostylis* and built them back up to specimen pots for the last two years and given plenty of tubers away.

A huge range of *Pterostylis* are available from the tuber banks of various ANOS Groups (especially ANOS Victoria), as so many of them are colony formers.

Check out your groups bulletin in December and put your order in. You will certainly get a lot of pleasure out of them.

Many of the available hybrids are easily grown and multiply well. I would recommend the following species (& a few natural hybrids) for beginners:

- *Pterostylis abrupta*
- *Pterostylis baptistii*
- *Pterostylis concinna*
- *Pterostylis curta*
- *Pterostylis erecta*
- *Pterostylis nutans*
- *Pterostylis obtusa*
- *Pterostylis ophioglossa*
- *Pterostylis pedunculata*
- *Pterostylis truncata*
- *Pterostylis Xconoglossa*
- *Pterostylis Xfurcillata*
- *Pterostylis Xingens*
- *Pterostylis Xtoveyana*

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Fourth Australasian Native Orchid Conference and Show Another Perspective

Murray Corrigan,
19 Allington Cr., Elanora Heights NSW 2101

"Native Orchids – Our Natural Heritage" was the theme. Brilliantly conceptualised in a display co-joining the show hall. During show set-up, a sliding wall partition hid the theme feature, which was only revealed in its magnificence on Show opening. Then entry was through a bushland track amongst mature native palms, trees, shrubs, native grasses and rock walls.

In each mini-eco area appropriate native terrestrial and epiphytic orchids flowered to perfection. Our walk through this delight was a joy to the eyes and our ears were filled with a continuous symphony of bird and frog calls appropriate to the theme sections. Apparently it took three days to set up!

Having completed our meander through the bushland, we faced the show display. There were thousands of Australasian native orchid species and hybrids on show, flowering to perfection. There were even whole displays comprising *Sarcochilus* only.

Terrestrial orchids, read about but never seen by many, superbly grown – not as single plants, but as pot fulls! Rare species, reputedly difficult to flower were in profusion. Including various *Pterostylis*, *Thelymitra* (with heat lamp, to keep blooms open), *Diuris* and *Caladenia*. Helen Richards and Malcolm Thomas benched most of these plants.

Adjoining the show was the plant and book sale area. Major native species and hybrid growers were represented with many fine plants and flasks on offer.

The speaker programme, organised by Gary Backhouse, covered two full days. The 22 speakers had been carefully chosen to present a wide and stimulating coverage of both technical and horticultural material.

ANOS accredited judges from various parts of Australia and New Zealand undertook the judging, which took just over four hours. It was of great interest to me as one of the founders of ANOS judges and the judging standards, to observe some differences in state standards! ANOS judges later had a formal meeting, as did delegates from ANOS groups, mainly to discuss the future of *The Orchadian*.

The closing dinner on Saturday night was held in ideal surroundings, with a majority of delegates present. It's a shame that some chose not to attend for their own reasons and held their own function.

The highlight of the evening for me was to present the Ira Butler Trophy Committee's R.D. FitzGerald Trophy for the first time. This award, the idea of I.B.T.C. Committeeman David Banks, is to recognise outstanding service to the advancement, propagation and conservation of Australian native orchid species. Having received an outstanding nomination from ANOS Victorian Group through Helene Wild. The I.B.T.C. unanimously resolved to present the first trophy at this Conference. It was my pleasure as Chairman of the I.B.T.C. (and only surviving founder member of the Committee) to present the inaugural trophy to Helen Richards. Helen's look of total surprise made my evening. Congratulations Helen.

My congratulations go to Tony Slater and his team. My thanks to Helene and Alex Wild for the pleasure of their company, on our many dashes across beautiful Melbourne.

Thank you all for the best conference, of any sort, that I have attended in the last forty years. It makes this old ANOS founder member very happy. We look forward to the next ANOS Conference and Show to be hosted by ANOS Macarthur Group and to be held at Campbelltown, NSW.

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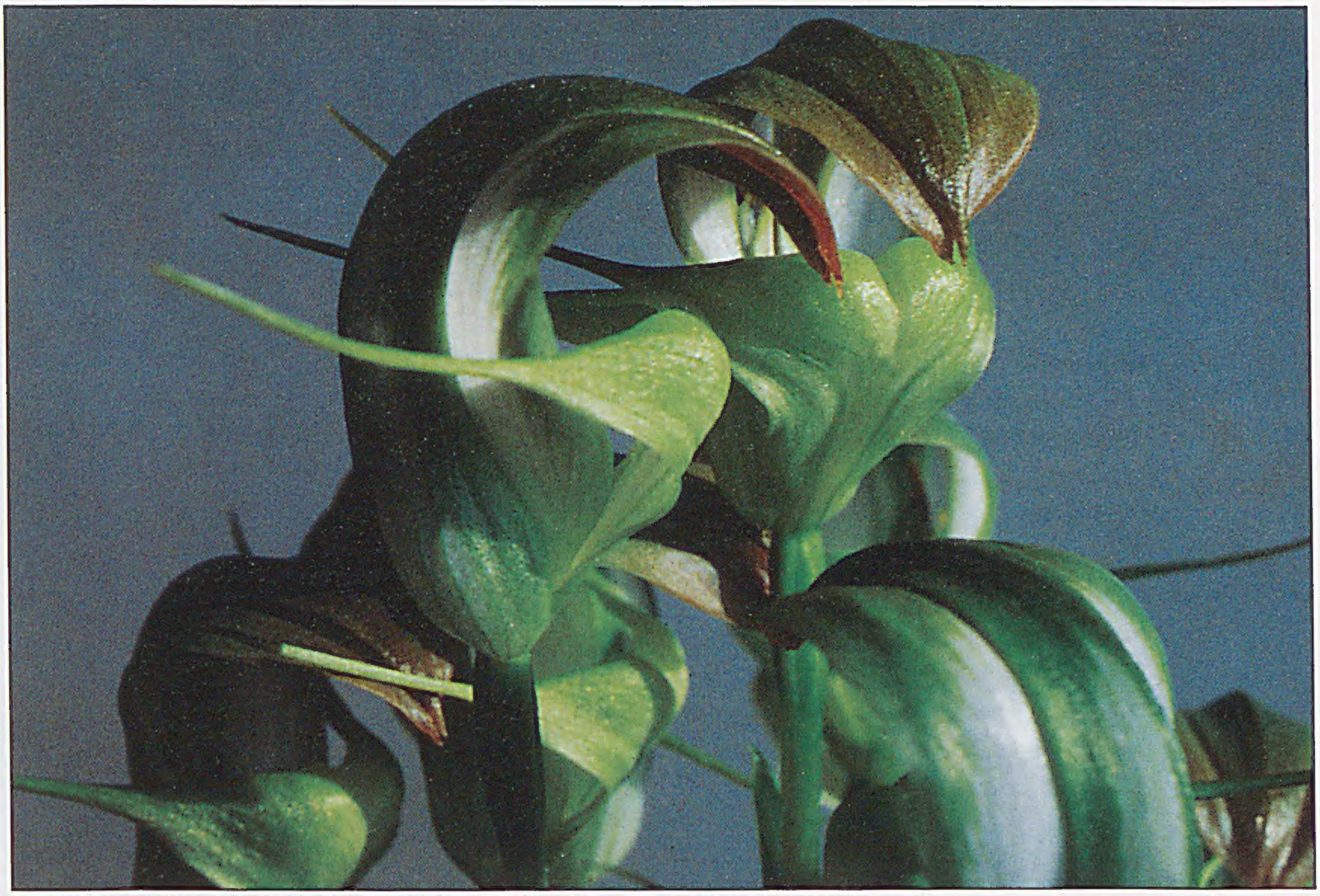
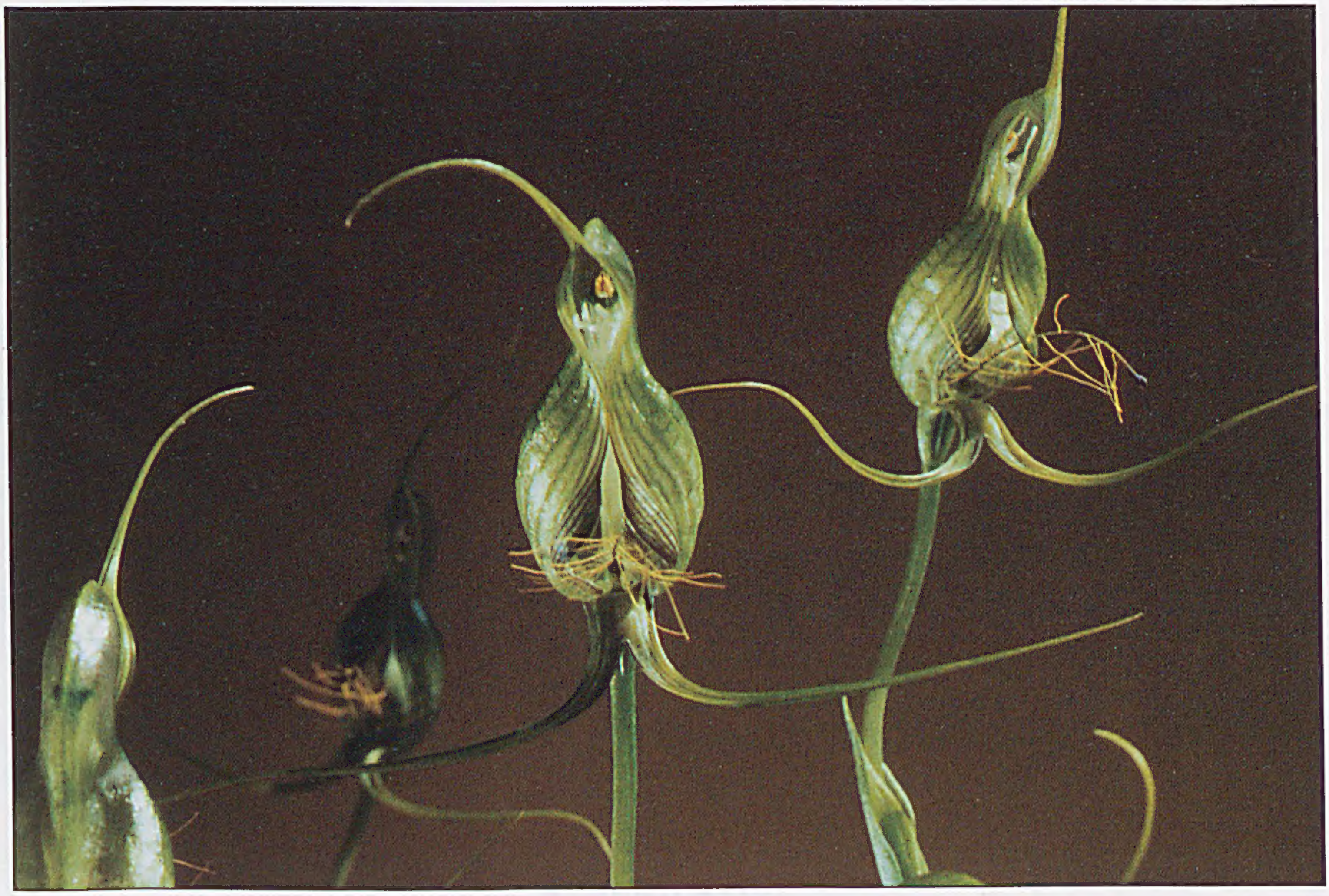


Helen Richards

Pterostylis baptistii 'Gosford'



Helen Richards

Pterostylis sp. aff. *barbata*

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DIRECTORY OF A.N.O.S. GROUPS (& Associated Societies)

NEW SOUTH WALES

- **ANOS Central Coast**, P.O. Box 3010 Erina 2250. ☎(02) 4328-5667. Meetings 8pm, 2nd Wed. each month. Temple Kiely Visitors Centre, Department of Agriculture Station, Research Rd., Narara.
- **ANOS Far North Coast**, P.O. Box 949 Ballina 2478. ☎(02) 6686-6303. Meetings 7.30pm, 3rd Fri. each month. C.W.A. Room, River Street, Ballina.
- **ANOS Illawarra**, 2 Wilford St., Corrimal 2518 ☎(02) 4284-8308. Meetings 7pm, 2nd Tue. each month. Legacy House, Market St., Wollongong.
- **ANOS Macarthur & District**, 28 Crispsparkle Dr., Ambarvale 2560. ☎(02) 9727-4491. Meetings 8pm, 3rd Wed. each month. Narellan Community Hall, Queen St., Narellan.
- **ANOS Mid-North Coast**, P.O. Box 128 Taree 2430. ☎(02) 6553-1012. Meetings 7.30pm, last Fri. each month. (Held at Taree or Wauchope - telephone Secretary for details).
- **ANOS Newcastle**, P.O. Box 273 Kotara Fair 2289. ☎(02) 4942-1362. Meetings 7.30pm, 4th Tues. each month. Warners Bay Community Hall, Crn John & Lake Sts., Warners Bay.
- **ANOS Port Hacking**, P.O. Box 359 Gymea 2227. ☎(02) 9524-9996. Meetings 8pm, 4th Wed. each month. Presbyterian Church Hall, 391/393 Port Hacking Rd. Sth., Caringbah.
- **ANOS Sydney**, 4 Regal Ave., Kings Langley 2147. ☎(02) 9624-1768. Meetings 8pm, 3rd Fri. each month. Senior Citizens Hall, Baulkham Hills Community Centre (off Conie Ave.) Baulkham Hills.
- **ANOS Warringah**, P.O. Box 421 Forestville 2087. ☎(02) 9416-4306. Meetings 8pm, 3rd Tue. each month. Community Hall, Starkey St., Forestville.

QUEENSLAND

- **ANOS Kabi**, P.O. Box 424 Aspley 4034. Meetings 7.30pm, 2nd Tue. each month (except Jan.). Bald Hills Memorial Hall, Gympie Rd., Bald Hills.
- **ANOS Logan**, P.O. Box 2103 Crestmead 4132. Meetings 8pm, 2nd Wed. each month. Logan City Works Depot, Cnr. Kingston & Smith Sts., Woodridge.
- **ANOS Mackay & Dist.**, 98 Belford Rd., Andergrove. ☎(07) 4955-1631. Meetings 8pm, 2nd Thur. each month. Andergrove Neighbourhood Centre, Belford Rd., Mackay.
- **ANOS Townsville**, P.O. Box 1147 Aitkenvale 4814. ☎(07) 4778-4311. Meetings 8pm, 1st Tue. each month. Townsville Orchid Society Hall, Pioneer Park (opp. Willows Shopping Centre), Thuringowa.
- **ANOS Wide Bay**, P.O. Box 15 Tinana 4650. ☎(07) 4122-1251. Meetings 7.30pm, 4th Wed. each month (except Dec.). Swimming Club Hall, Burrum St., Howard.
- **Native Orchid Society of Toowoomba**, P.O. Box 2141 Toowoomba 4350. Meetings 7.30pm, 1st Fri. each month. Red Cross Hall, Hall Lane (off Neil St.) Toowoomba.

VICTORIA

- **ANOS Geelong**, 1 Elizabeth St., Belmont 3216. ☎(03) 5243-4286. Meetings 8pm, 2nd Wed. each month. Uniting Church Hall, Regent St., Belmont.
- **ANOS Victoria**, P.O. Box 2685 Cheltenham 3192. ☎(03) 9954-7692. Meetings 8pm, 1st Fri. each month. Demonstration Hall, Burnley Horticultural College, Swan St., Burnley.

SOUTH AUSTRALIA

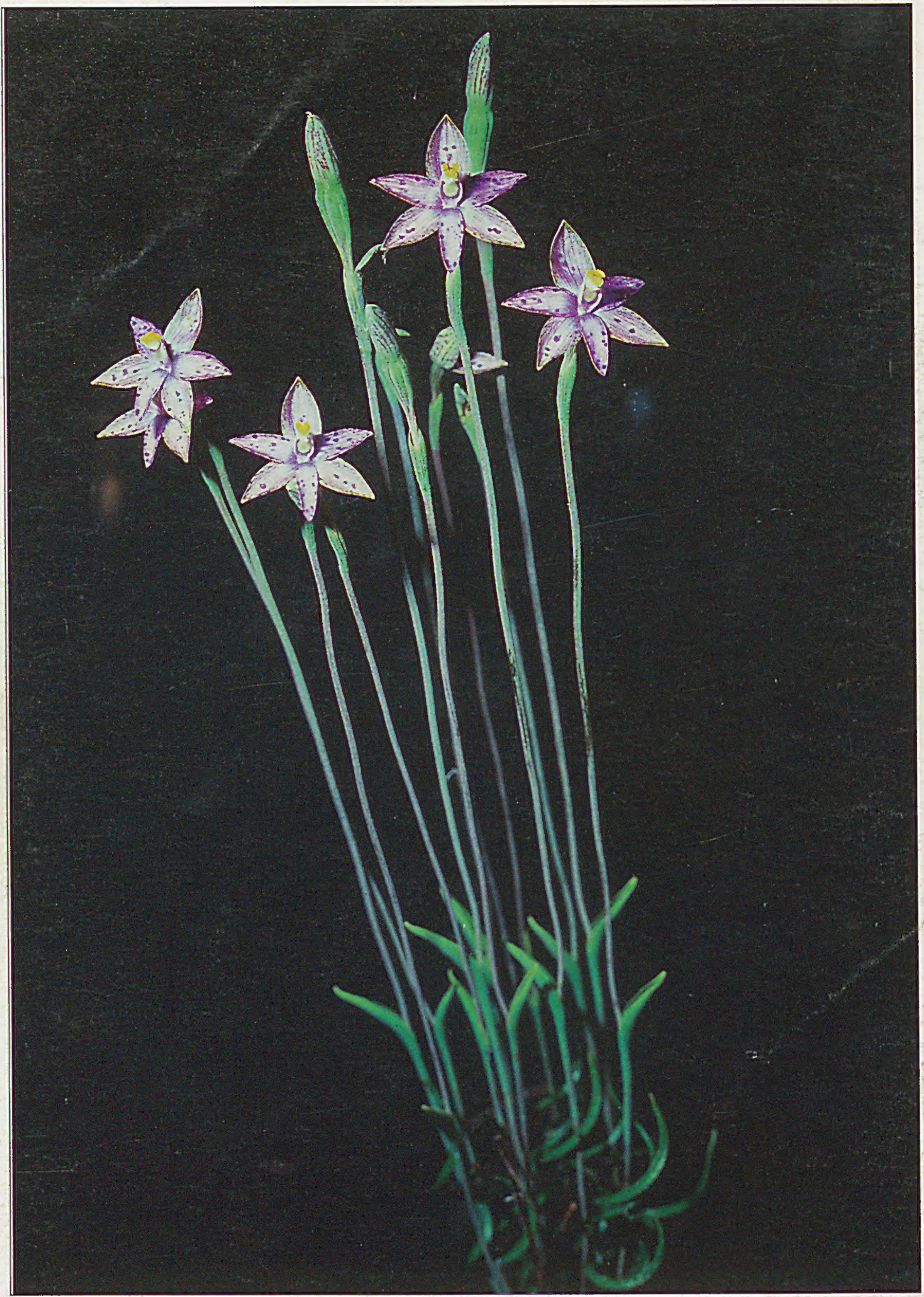
- **Native Orchid Society of South Australia**, P.O. Box 565 Unley 5061. ☎(08) 8356-7356. Meetings 8pm, 4th Tue. each month. St. Matthews Hall, 67 Bridge St., Kensington.

WESTERN AUSTRALIA

- **ANOS Western Australia**, 95A Ewen St., Scarborough 6019. ☎(08) 9341-6709. Meetings 8pm, 2nd Mon. each month. Wilson Community Hall, Brailbrise Rd., Wilson.

NEW ZEALAND

- **ANOS New Zealand**, 20 Fairlands Ave., Waterview, Auckland, New Zealand.
- **ANOG**, 51A Glenharrow Ave., Christchurch, New Zealand. ☎(03) 342-7474.
- **New Zealand Native Orchid Group**, 22 Orchard St., Wadestown, Wellington, New Zealand.



R. Heberle

Thelymitra spiralis

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